EDITORIAL INDEX—PAGE 2

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AUGUST 1950

ccj COMMERCIAL CAR JOURNAL

THE MAGAZINE FOR FLEET OPERATORS

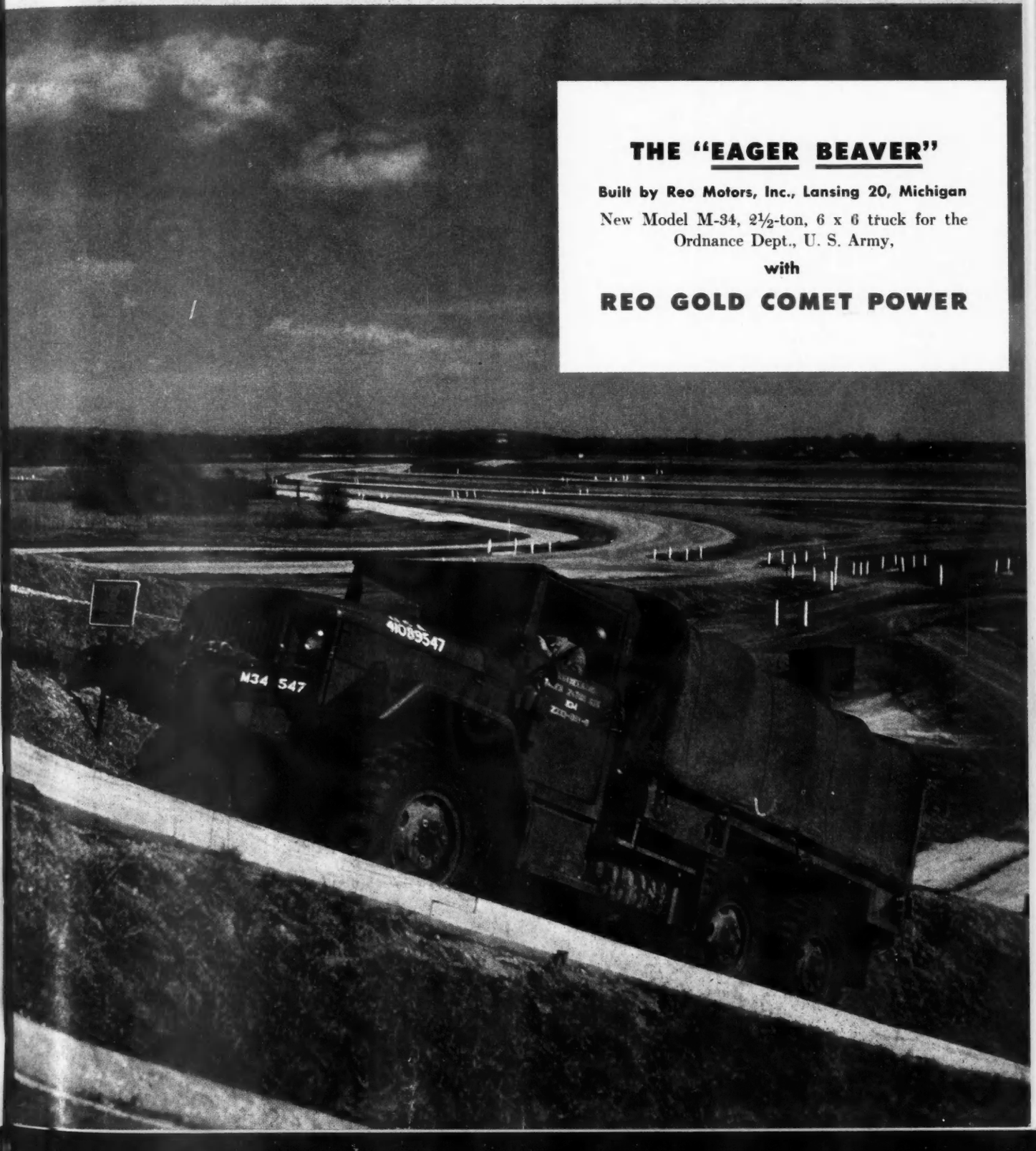
THE "EAGER BEAVER"

Built by Reo Motors, Inc., Lansing 20, Michigan

New Model M-34, 2½-ton, 6 x 6 truck for the Ordnance Dept., U. S. Army,

with

REO GOLD COMET POWER



It's a long haul between overhauls!

DODGE TRUCKS are "Job-Rated" to cut costs!

"Job-Rated"...for low cost transportation

POWER: . . . **8** great truck engines—each "*Job-Rated*" for *PLUS* power.

ECONOMY: . . . priced with the lowest. "*Job-Rated*" for dependability and long life.

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With all their extra value **DODGE "Job-Rated" TRUCKS** are priced with the lowest

Form-A-Gasket No. 1, Fast Drying Paste... Hard Setting
Form-A-Gasket No. 2, Non-Hardening Paste... Stays Pliable
Aviation Form-A-Gasket No. 3, Heavy Liquid... Remains Tacky

PERMATEX COMPANY, INC., BROOKLYN 35, N.Y.

COMMERCIAL CAR

Vol. LXXIX Philadelphia, August, 1950 No. 6

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CCJ Reader Digest

Own Recap Plant Saves Fleet $1000 a Month

Many fleets recapped tires during the last war but their plants were abandoned or disposed of as tire supply became plentiful. The imminency of all-out war may be one good reason to reconsider such a plant. But, war or no war, a saving of $1000 a month is a good reason to find out how this fleet does it. See Page 58.

Attractive Appearance Boosts "Rider Appeal"

The greatest danger of declining passenger revenues is the temptation to omit, reduce or cut the quality of a bus' appearance and maintenance. Harrisburg Railways lures riders with clean and attractive vehicles. This article describes its unusual and, probably, unexcelled appearance maintenance program. Even the dirtiest of weather conditions hardly dims the fleet's gleaming appearance. See Page 52.

Driver Cooperation Can Cut Bus Costs

This is Part 2 of the most unusual story on the methods Capital Transit employed when compelled to slash its maintenance costs. The author cites cases where the transportation department can help in a big way. See Page 73.

Roll-Off Body Cuts Delivery Costs

Numerous advantages have been claimed, in the past, for demountable truck bodies. Just how these claims stack up with many years of daily experience under toughest possible conditions is outlined in this article by a well-known body designer. Some of the advantages mentioned are elimination of one materials handling operation, loading by experts instead of drivers, chassis maintenance while body is loaded, flexibility of a semi-trailer, and so on. See Page 68.

JOURNAL

with which is combined Operation & Maintenance

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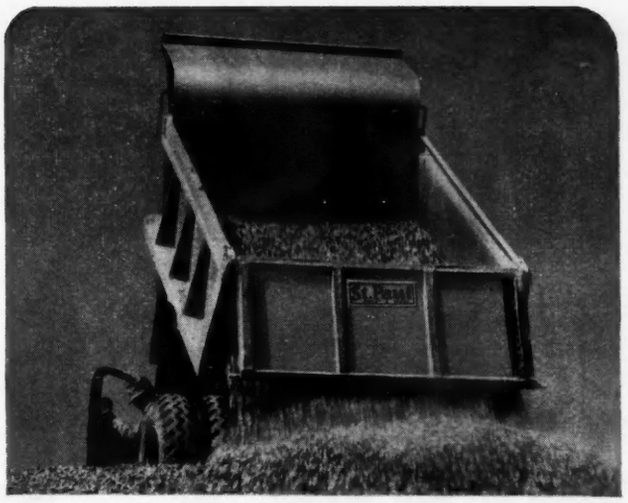
Factors Affecting HP in Diesels

Complaints of poor power in diesel engines result from improper engine adjustments, insufficient or improper fuel, insufficient air reaching the combustion chamber. These factors, however, are easily controlled by careful attention to maintenance. If an operator would enjoy the most economical performance from his vehicles, he will set up timely and complete PM practices, keep fuel adjustments to factory specifications, insist upon prescribed driving routines and refrain from overloading. Improved power and less exhaust smoke will more than pay for his trouble. See Page 60 for timely tips on improving the performance of your diesels.

Consolidated's Plan Makes Safer Drivers "Safer"

Consolidated Freightways' reputation in the field of fleet safety is well known. The "Freighters" have quite a gallery of safety trophies and certificates to prove it. Just what makes this safety conscious organization get such outstanding results is outlined in this article, which, in itself, is unusual in that it was not written by one man. Three different observers examined every phase of Consolidated's program. What one missed or saw in part, another got a close observation. Together, this is "must" reading regardless how much heat or vacation thoughts interfere. See Page 49.



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the complete St.Paul line

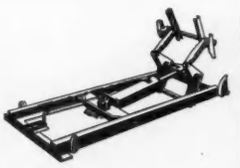
***Dump* IT HOISTS**

A Dump It Hoist makes a dump truck out of any platform body type of truck. Users on farms, in lumber yards and industries are finding that *dumping* the loads saves time, labor and money.

●

STANDARD DUTY

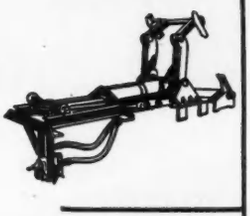
With dump bodies of 8 to 10 ft. lengths and 2 to 5 cu. yd. capacities St.Paul offers four arm-type hoist models. These units are used on trucks with a nominal rating of 1½ to 3 tons. All have the new St.Paul roller-bearing pump, honed cylinders, cast steel lifting arms and links.



●

HEAVY DUTY

For trucks with a nominal rating of 3 to 10 tons and for trailer installations the St.Paul line includes 3 hoists (Models 7, 85 and 95) and two series of heavy duty bodies (8 gauge and 10 gauge steel). Body capacities may be up to 10 cubic yards.



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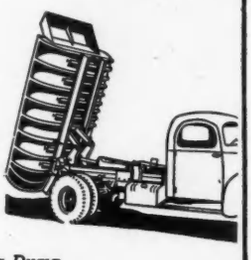
HI-DUMPERS

For quarrying or mining operations St.Paul provides Excavator type bodies of ¼" steel plate with I-beam outside bracing. For dumping this type of body in capacities up to 8 cu. yd. we offer the St.Paul line of Hi-Dumper Hoists with dumping angle of 70°.



At your service—your St.Paul Distributor—a Dump Body Specialist. Write us for his name.

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GAR WOOD INDUSTRIES, INC.
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TEXACO

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CoMax brake lining quick, safe, smooth stops!

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Wagner also knows what is required of a good brake lining—and CoMaX is the answer for all relining jobs.

Wagner CoMaX Brake Lining has a uniform texture that assures the same type of brake surface always being exposed to the drum—contributing to smooth, even deceleration.

This proven product is non-compressible . . . It won't swell . . . is age-proof . . . contains no abrasive materials, and is easy on drums. It will pay you to standardize on this *complete* line. Available in sets, blocks, rolls, slabs and cut segments.

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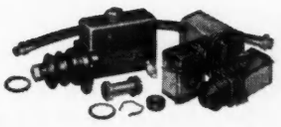
WAGNER LOCKHEED HYDRAULIC BRAKE PARTS



—a *complete* line, covering *all* makes of cars and trucks, including seldom used, slow-moving parts not easily obtainable elsewhere.

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Factory Service

Continued from Page 10

IHC (continued)

Oil Level Gage

RD-372, RD-406, RD-450 Engines—Reports that the recommended crankcase refill capacity of 9 quarts (without filter cartridge change) does not bring the oil level up to the full mark on the oil level gage (dip stick) have been investigated, and it has been found that the incorrect length oil level gage bushing has been installed on all RD engines at the factory.

The *incorrect* oil level gage bushing extends out of the crankcase 4 ± 1/32 in. and should be removed and shortened by cutting 3/8 in. from the top end of the bushing. The *correct* length the oil level gage bushing should extend out of the crankcase is 3 17/32 ± 1/32 in.

Cylinder Head Cracking

A number of cylinder heads were fabricated in which the sharp corners around the gasket face edge of the combustion chamber and spark plug holes were not removed. Sharp corners or burrs in the cylinder head combustion chambers will create hot spots in the combustion chambers and cause premature ignition of the fuel charge. which will in turn provoke excessive back-pressure. Premature ignition before the completion of the compression stroke will cause the engine to "labor," generating excessive temperatures and pressures in the cylinders and cause gasket failure, premature engine wear or cylinder head cracking.

Whenever a cylinder head has been removed from an engine in service or when installing a new cylinder head all sharp corners or burrs in combustion chambers must be removed. Grind if necessary.

Engine Fan Drive Pulley

To standardize fan drive pulleys and fan drive pulleys with damper assembled, used on production RED and RD engines and for service requirements, the following changes have beeen made.

Production engines *not* air compressor equipped will now be built employing the three grooved fan drive pulley and damper assembly as heretofore used only on air compressor equipped engines. Up to the present, engines *not* air compressor equipped were built with a two groove fan drive pulley and damper assembly.

Further standardization of fan drive pulleys and fan drive pulleys with damper assembled has been accomplished by incorporating two timing notches on the fan drive pulley. Heretofore, different fan drive pulleys and/or fan drive pulleys with damper assembled were required for certain RED and RD engines because of the difference in timing notch location.

The first notch on the fan drive pulley in the direction of engine rotation should be used for timing RED-361, RD-372, RD-406 and RD-450 engines. The second timing notch on the fan drive pulley in the direction of engine rotation should be used for timing RED-401 and RED-450 engines. (See figure 1.)

Valve Seat Width

SD-220 and SD-240 Engines—The intake valve seats have been increased in width from 1/64-3/64 in. to 3/64-5/64 in. and the exhaust valve seats increased in width from 3/64-5/64 in. to 5/64-7/64 in. to increase valve life. The wider valve seats will provide increased valve life due to the larger contact area obtained when the valve is in a closed position, thus allowing a greater amount of heat to be transferred away from the valve head.

● Plymouth ●

Moisture in Distributor

If hard starting is traceable to condensation in the distributor cap, the following remedy may be used. Drill a 1/8-inch hole through the side of the distributor cap, just above the shoulder, under the spring clip on the lower side.

● Studebaker ●

Throttle Control Bell Crank

On some early 9G Champion models it is possible that the throttle control bell crank is too long and hits the vacuum spark modifier on the distributor, thus making it difficult to set the ignition timing.

If this type of interference is found, measure the bell crank. It should be 5 in. long. If the bell crank is too long, replace it with a new bell crank, Part No. 526798.

Oil Leak at Front End of Crankshaft—9G; 17A

To correct a condition of oil leak at the front end of the engine crankshaft on the 9G; 17A, the following precautions must be observed:

Remove the timing gear cover and inspect the crankshaft gear making sure it is properly in place on the crankshaft. The fan pulley hub face should be inspected for dents and scratches and smoothed down or replaced if necessary. The timing gear cover should be inspected for leaks at the weld between the felt oil washer retainer and the cover. In the event the weld shows a leak the timing gear cover, Part No. 518495 (Champion) or Part No. 191047 (Commander), should be replaced. When reassembling, the lock plate on the front of the vibration damper should be coated with Permatex or its equivalent and the cap screw (Champion) or nut (Commander) thoroughly tightened.

Turning Difficulty

On truck Serial Nos. R5-19152 to R5-20939 and R10-9039 to R10-10184, inclusive, there may be a possibility that the unit cannot be turned as sharply to the left as to the right.

In such cases it is probable that Part No. 679002 reach rod, which is 33¾ in. in length, was installed. To obtain the correct turning radius, a longer reach rod, Part No. 678226, 34¾ in. long, must be used and the steering gear arm relocated on the sector shaft.

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HAUL 2½ MILLION LBS. MORE A YEAR . . .

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√ Stronger Extruded Shape Construction!

√ Load-Tested in the Field!

√ Fine Appearance . . . Easy to Maintain!

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MEET today's rising operating costs by following Mr. Johnson's example . . . put rugged, lightweight, All-Aluminum Trailmobiles on your job!

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THE TRAILMOBILE CO., 31st & Robertson, Cincinnati 9, Ohio
I am very much interested in the new Trailmobile All-Aluminum Trailers. Please send me complete descriptive information.

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The OVERLOAD

EDITORIAL COMMENT

15 Trucks and 5 Passenger Cars—Friends or Foes?

WAR in Korea, possible troubles on the Maryland Road Test, wind-up of the Senate transportation hearings—all presented tempting possibilities for editorial treatment at month's end. But let's face it. We're a monthly publication and from the news standpoint things are changing fast. Besides that, it's hot in Philadelphia. So instead we're turning to an old but important perennial for summer reading.

It happened on the night of June 22 on Route 22 between Allentown and Harrisburg, Pa. Fifteen trucks and five passenger cars going up most of a mile-long hill at 2 mph. Fourteen truck drivers mad as a hornet; four passenger car drivers ready to agree with every dirty piece of railroad propaganda ever put out; and . . . an editor.

It wasn't a big hill—maybe 3 per cent. All but one of the trucks—the lead one—could probably have made it at 10 mph. All of the passenger cars could have made it easily at 50. What was wrong?

Was it the two mile-an-hour creeper at the lead? We don't think so. He was definitely under-powered, of course, but definitely not the major trouble.

Was it the highway? No. There was only one gentle curve, and that to the left, until very near the top. Average visibility was nearly half a mile and there was only occasional on-coming traffic.

Was it the size and weight of the trucks? Definitely not. The road has plenty of width to handle them and it is in reasonably good condition.

Was it the volume of traffic? No. On normal stretches anybody that wanted to could roll at 50.

What then? To us the whole answer boils down to one simple rule broken simultaneously 14 times. It was the failure of all the trucks—particularly the number two man—to maintain legal spacing of 50 ft. In short—tailgating!

If the number two truck had insufficient power to pass the creeper at a given point, number three truck could certainly have passed both one and two with his added momentum as he rolled up the hill, IF the space had been there for him to perch. But it wasn't. And so it went for 14 places right down the line.

Now let's suppose for a moment that these drivers had kept the law; maintained their 50-ft spacing. What would have been the net result?

Obviously, the creeper would have been exactly where he was. Probably half the other trucks would have passed him and been 10 minutes ahead on their schedule. The other seven would have been an average of 175 ft ($7 \times 50 \div 2$) further back when they reached the top. At even 2 mph, *that's exactly 59 seconds.* It would be tough to be 59 seconds late at the terminal, or the diner, wouldn't it?

What about the passenger cars? All would have been happily on their way. Only 10 minutes ahead, to be sure. But back home they would be talking about real "gentlemen of the highway" instead of voting next election day for anyone willing to fight those g.d. "box-cars on rubber tires."

It was just one instance of just one shortcoming. But the solution seems so simple. First and foremost a genuine desire on the part of the operators to do something about it. Second, a little basic driver education. Third, a little not so-basic supervision and enforcement. Result: Friends instead of foes on the highway, a step toward peace in the legislatures and a deep gash in the railroads' file of anti-truck propaganda. Isn't it worth a try?

Bart Rawson
Editor

CLIP THAT DRIP!

Don't let this leak out—but word has it that many of these dry land vehicles have taken up swimming in a frantic move to survive sloppy maintenance practices. Reeking in oil and grease, and oozing at every seam, they have had a hard time keeping the profit slate from taking on the same disgusting appearance.

These slurpy trucks eat well into a worn pocketbook, when owners must replace the precious stuff that makes them go, or when they have to replace vehicles that went too long on too little.

Dirty engines and power train assemblies, cloaked in a warm blanket of grime soon get a hot temper up and pull a slow down just when they are needed most. They spread the "elements" over the highway and garage floors faster than a juicy bit of scandal can cover the party line. But when tracked to hideaways in deserted shops they can be found alone and unattended, dripping to a crankcase content.

How in hell can you pull a quick-check on a vehicle disguised in this manner? Who can replace a part or an assembly without shoving some of this crud into vital engine parts? Who can't afford a steam cleaner, or a little elbow grease to keep these units safe and respectable?

But why does a power plant have to "sweat it out" in this way? It doesn't take 20/20 vision to find the following troubles with an "uninhibited" truck—and it wouldn't take 20 minutes to fix most of them:

1. **DRIPPING oil from crankcase drain plug, gasket, seals**
2. **LEAKING gear boxes at transmission, power take-off, differential**
3. **OOZING brake fluid from master cylinder, wheel cylinders, lines**
4. **SEEPING gasoline from carburetor, fuel tank, lines**
5. **SPURTING coolant from radiator, cylinder head, hoses**

Without water, oil, gasoline you won't do much hauling, so let's plug the leaks before we get squeaks from the front office. A twist of the wrist, a new gasket, a bearing adjustment will take less time and effort than writing out a justification for a new truck—or an excuse for a ruined engine.

Yes, ooze means blues when housings lose the stuff that makes trucks truck fer youse.

Reprints of the above are available at nominal cost. Write the Editor.

WHEN THE JOB IS *Tough*

ROSS BRINGS EASE . . . AND ECONOMY

A HIGH HILL, a rainy slippery road, but this heavy moving van, loaded with furniture, goes right along with steering ease, due to Ross Cam & Lever Steering.

The Ross policy of incorporating advancements in design as they are proved by exhaustive tests has resulted in many recent improvements. Current Ross models have:

(1) *Increased mechanical reduction* . . . (2) *More compactness* . . . (3) *Reduction in weight* . . . (4) *Greater arm angular-travel* . . . (5) *Improved metallurgy* . . . (6) *Increased efficiency*.

Throughout 43 years of leadership in this industry, Ross gears have been distinguished for long life, simplicity of adjustment and maintenance of long-recognized qualities of safety, stability and performance. We invite discussion of any steering problem.

Ross

Cam & Lever ***STEERING***

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CCJ REPORTS

on News of the Industry

Trucks Pay Their Way Committee Hears

As this issue went to press, trucking interests were winding up their side of the testimony before Senator Myers' (D., Pa.) Sub-committee on Domestic Land and Water Transportation. The nearly 2000 pages of testimony gave the Committee much to think about. Trucks, it found, are a vital factor in the nation's economy, and *they pay their way.*

But the Committee also learned that all was not rosy within the industry. It heard regulated carriers attack exempt carriers with telling blows. It heard the pros and cons of the leasing problems. It was told of the extreme hardships imposed by the total absence of uniform regulations. Last but not least, it pondered the problems of common as opposed to private carriers. At this writing, the latter had not been heard from but they were on the docket.

What will be the results, if any? It's far too early for an answer to that question. But this much is sure: Never before in history has so much information about the highway transportation industry been assembled in a single place. If the Committee studies the data seriously, it can peg the railroads where they belong and might recommend some healthy corrective legislation. (Also, see Washington Runaround, P. 35.—Ed.)

New ICC Rules Okay Trip Leasing

The new ICC Leasing Regulations, which have been in the process of formulation for the last 2½ years, seem generally acceptable.

Of greatest interest to private carriers is that trip leasing is not prohibited. Moreover, there is nothing in the rules that specifies the manner of payment for leased equipment. Regulated carriers are permitted to rent vehicles with drivers from private carriers without time limit. However, the reverse is not true. Private carriers may rent vehicle from for-hire carriers only without drivers and only when not identified.

Of interest to for-hire carriers is the fact that greater controls are imposed on them in leasing private carrier vehicles. The rules call for written leases, definite manner of issuing receipts, inspection of equipment, records of use, and so on.

The regulations do not provide for relief from written leases in case of emergencies. (See P. 112—Ed.)

(TURN TO PAGE 192, PLEASE)

DATES and DOINGS

AUG. 14-16—Society of Automobile Engineers (West Coast Meeting), Biltmore Hotel, Los Angeles, Calif.
AUG. 19—New Mexico Motor Carriers Assn. Truck Rodeo, Albuquerque, N. M.
SEPT. 4-6—Mississippi Transport Assn., Inc., Annual Convention, Buena Vista Hotel, Biloxi, Miss.
SEPT. 8-9—Kansas Motor Carrier Assn., Annual Convention, Broadview Hotel, Wichita, Kan.
SEPT. 8-9—North Carolina Motor Carrier Assn., Annual Convention, Mayview Manor Hotel, Blowing Rock, N. C.
SEPT. 8-9—West Virginia Motor Truck Assn., Annual Convention, Hotel Waldo, Clarksburg, W. Va.
SEPT. 9—Maine Truck Owners Assn., Second Annual Truck Roadeo, Bass Park, Bangor, Maine.
SEPT. 11-15—Fleet Supervisors Training Course, Penn State College, State College, Penna.
SEPT. 11-15—Fleet Supervisors Training Course, Purdue University, Lafayette, Ind.
SEPT. 11-12—Wisconsin Motor Carriers Assn., Annual Convention, Lake Lawn Resort, Delevan, Wis.
SEPT. 11-14—American Assn. Motor Vehicle Administration, Annual Meeting, Multonomah Hotel, Portland, Ore.
SEPT. 12-14—Society of Automotive Engineers, Hotel Schroeder, Milwaukee, Wis.
SEPT. 13-14—Tennessee Motor Transport Assn., Annual Convention, Andrew Jackson Hotel, Nashville, Tenn.
SEPT. 13-15—National Assn. Motor Bus Operators, Annual Meeting, Drake Hotel, Chicago, Ill.
SEPT. 14-16—Pennsylvania Motor Truck Assn. Fall Meeting, Galen Hall, Wernersville, Penna.
SEPT. 14-16—Virginia Highway Users Assn., Annual Convention, Hotel Chamberlain, Old Point Comfort, Va.
SEPT. 15-16—Michigan Trucking Assn., Annual Convention, Park Place Hotel, Traverse City, Mich.
SEPT. 16—Massachusetts Motor Truck Assn., Inc., Annual Convention, New Ocean House, Swampscott, Mass.
SEPT. 18-22—Fleet Supervisors Training Course, Ohio State University, Columbus, Ohio.
SEPT. 25-27—American Transit Assn., 69th Annual Convention, Biltmore Hotel, Los Angeles, Calif.
SEPT. 25-27—National Truck Body Mfrs. and Distributors Assn., Annual Exhibit and Convention, Shoreham Hotel, Washington, D. C.
SEPT. 25-29—Fleet Supervisors Training Course, University of Kansas (Ext.), Wichita, Kan.
OCT. 2-6—American Trucking Assn., Annual Meeting, Waldorf-Astoria Hotel, New York, N. Y.
OCT. 9-13—Fleet Supervisors Training Course, University of Minnesota, Minneapolis, Minn.
OCT. 16-18—Society of Automotive Engineers (Transport Meeting), Hotel Statler, New York, N. Y.
OCT. 16-20—38th National Safety Congress and Exposition, Chicago, Ill. Sessions at Stevens, Congress and Morrison Hotels.
OCT. 20-21—Indiana Motor Truck Assn., Annual Convention, French Lick Springs Hotel, French Lick, Ind.
OCT. 24—Motor Transportation Assn. of Connecticut, Annual Convention, Bond Hotel, Hartford, Conn.
NOV. 1-3—American Society of Body Engineers, 5th Annual Technical Convention, Rackham Memorial Bldg., Detroit 2, Mich.
NOV. 2-3—Society of Automotive Engineers Diesel Fuel Meeting, Hotel Knickerbocker, Chicago, Ill.
NOV. 2-3—Arkansas Bus & Truck Assn., Annual Convention, Marion Hotel, Little Rock, Ark.
NOV. 9-10—Society of Automotive Engineers Fuels & Lubricants Meeting, Mayo Hotel, Tulsa, Okla.
NOV. 13-17—Fleet Supervisors Training Course, University of Virginia, Charlottesville, Va.
NOV. 16-18—Montana Motor Transport Assn., Annual Convention, Rainbow Hotel, Great Falls, Mont.
NOV. 20-24—Fleet Supervisors Training Course, Georgia School of Technology, Atlanta, Ga.
NOV. 26-DEC. 1—American Society of Mechanical Engineers, Hotel Statler, New York, N. Y.
DEC. 4-8—Automotive Service Industries Show, Navy Pier, Chicago.

*Peoria Cartage Co. reports . . .

78,982 miles of wear on COOPER ALL-DUTY TRUCK TIRES . . . .

with many more miles expected

If your present tires aren't delivering satisfactory service, if tire costs are out of line — then profit from the experience of Peoria Cartage and change to cooler-running Coopers.

Here are the facts: A set of 10:00-20 Cooper All-Dutys was placed on the drive wheels of a tractor unit used on the toughest haul this company makes. 78,982 original miles had been delivered at the time J. J. Buck reported results — and the tires were still running, still delivering lower-cost service.

More likely than not . . . Cooper truck-bus tires can reduce operating costs for you — whether the best mileage obtained from your present tires is higher or lower than that recorded by Peoria Cartage. Your Cooper dealer has some very interesting reasons why —and they're yours to evaluate, no obligation of course.

Distributed Stress Constructed
. . . an exclusive Cooper truck tire feature that protects against localized flexing and high friction heat
Coopers run cooler . . . run longer

*Report by J. J. Buck, Gen. Mgr., Peoria Cartage Co., Peoria, Illinois. Copies available upon request.

Cooper TIRE & RUBBER CO.
Factories at Findlay, Ohio

Tires • Tubes
Batteries • Accessories
Repair Materials

CCJ REPORTS

DETROIT DISPATCH

by LEN WESTRATE Detroit News Editor

Situation Fluid

When all is confusion and no one knows what the score is, the military says the situation is fluid. That's the way things stand in Detroit so far as the effects of the Korean fuss is concerned. As always, wild rumors are floating around, but actually business is going on very much as usual although under a noticeable strain of apprehension.

The first tank order in the automotive industry since the end of the war is expected by GM shortly. It is understood that 28-ton tanks will be built at a government standby plant in Cleveland used by Fisher Body during the war for production of engine nacelles. Consequently, the pending contract will have no effect on automobile production, insofar as facilities are concerned. It might have some effect from the materials standpoint. The Cadillac Div. will have direct supervision of the tank project, and the organization will include executives from Cadillac and other divisions of the corporation. Transmissions used in the tanks will be supplied by Allison Div.

Since the end of the war, Cadillac Div. has maintained contacts and relations with the Ordnance Dept. on new developments and production plans for tanks. Discussions had been stepped up in recent weeks. It is significant that standby facilities are being used in the initial stages of the military program indicating that automobile and truck plants probably would not be called into service until other available facilities are fully occupied.

There admittedly has been a marked effect on demand for trucks, passenger cars, tires, batteries and other automotive items with the clamor for passenger cars approaching panic buying in some sections of the country. There have been rumors about rationing of tires and some ill-advised operators have been stocking up to some extent. However, the actual fact is that there are still plenty of tires to go around and rationing is not an immediate prospect since the President does not have the power to do so without authorization from Congress. In fact, it is felt that the only justification for early rationing would be action by the public rushing in "to get it before the hoarders." Prices, however, again have been increased, with truck replacement tires up about 7½ per cent.

The effect of the war probably will be felt first in the diversion of steel and possibly other materials from civilian production to military use. The thousands of military vehicles under order are "plus" production, but in the event the already strained steel supply cannot stand the pressure, the brunt will be borne by commercial production since the government has the power under the Draft Act to allocate steel if the mills do not do so voluntarily. It is very likely that steel allocations on a voluntary basis or otherwise will be very much with us again very soon.

Truck Output Secure

In spite of rumors about conversion to war work in Detroit, as this is written the industry expects to push ahead at full speed on both military and commercial truck and passenger car production but with full knowledge that the steel supply is very precarious and that there is a chance that civilian output may suffer somewhat. As for the trucking industry itself, it again would play an important role in the event of an all-out war. In the event of evacuation of large industrial centers trucks would play an extremely important part because of their maneuverability, great numbers, and their ability to get the job done quickly. Greater dispersion of war plants away from industrial centers also would place a heavy burden on the trucking industry for moving supplies in and out where rail facilities are not available.

Prices May Swing Up

We have mentioned in this column in recent months the trend of increasing prices of materials and components going into truck manufacture. The latest is a 12½ per cent boost in truck and bus tires for original equipment. Passenger car tires increased 8 to 10 per cent. Even with competition as fierce as it is in the truck industry the possibility of a price increase on trucks is not out of reason if the current cost trend continues.

Military Trucks

Further clarification on the military truck order granted to Studebaker for 4000 units reveals that the vehicles are identical in every respect to those being built by Reo. (See page 70.) The latter company will furnish engines, cabs, and other sheet metal to Studebaker and the driving components will be furnished by Timken, which also makes the same unit for Reo. Other truck companies to be given military truck orders are Dodge, ¾-ton units; International, 1½-ton units; Chevrolet, ½-ton trucks; GMC, 2½-3-ton models and Willys-Overland, ¼-ton Jeeps. It is emphasized, however, that these military orders are largely for replacement of aged vehicles now in military service.

(TURN TO PAGE 198, PLEASE)

A precision product

Timken® bearings are made on the most precise production machinery of its kind. And gauges of uncanny accuracy constantly check the exceedingly close tolerances of every part manufactured.

For example, taper gauging machines check the angles of cups, cones, and rollers to a single second of arc. The master taper gauging machine shown above graduates readings to the hundred thousandth of an inch and indicates millionths by means of reflected light.

The precision which results from this kind of manufacture is one reason why Timken bearings are first choice with leading truck manufacturers everywhere.

Another reason why TIMKEN® bearings are first choice with truck manufacturers

SINCE THEY'RE BEST WHEN THE TRUCK IS NEW ...THEY'RE BEST FOR REPLACEMENT, TOO!

REPLACING A TIMKEN BEARING with a Timken bearing is the way to be *sure* of continued precision for a long, long time. For not only does the precision of Timken bearings keep rotating parts in proper alignment; their tough alloy steel and advanced design make Timken bearings last longer under the toughest of loads. SEND FOR FREE BOOKLET: *Timken Tapered Roller Bearings, Their Care and Maintenance.* Contains 20 pages of practical tips for mechanics, garage men and fleet operators. Write Dept. JC-8, The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO".

TIMKEN

TRADE MARK REG. U. S. PAT. OFF.

TAPERED ROLLER BEARINGS

NOT JUST A BALL ○ NOT JUST A ROLLER ▭ THE TIMKEN TAPERED ROLLER ▭ BEARING TAKES RADIAL ↕ AND THRUST →○← LOADS OR ANY COMBINATION →✳←

CCJ REPORTS

WASHINGTON RUNAROUND

by GENE HARDY Washington Correspondent

No Adverse War Impact on Industry Seen

Moves toward partial mobilization to enable the United States to meet its world responsibilities are not expected to have a substantial adverse effect on the trucking industry. Little, if any impact, is anticipated equipment-wise. Manpower will be a problem in individual cases. Traffic will increase. Controls on transportation as such are not in the wind. The long hoped-for cuts in excise taxes have gone down the drain. Increases in personal and corporate taxes are almost certain, in order to foot the bill for the expanded mobilization effort. More attention will be paid to highway needs throughout the country. The big worry spot in the transportation situation is the railroad freight car shortage.

No Curbs on Civilian Truck Output Seen

No special impact on civilian truck output is anticipated so long as the action is confined to Korea. Creeping war in other parts of the world, or the outbreak of World War III obviously would change the situation completely. Before President Truman had made his moves toward partial mobilization, four major truck producers had substantial orders for military vehicles. While truck manufacturing facilities are being used rather fully, it is believed that the industry could take military orders for as many as 100,000 additional vehicles before any real impact might be felt by the trucking industry. Supplies of steel and other tight metals will be a problem, but the government's priority and allocation powers are expected to overcome this handicap. Much the same can be said for truck-trailers and parts. It is believed that the military has substantial stocks of trailers already on hand.

Minimum Essential Needs Study Made

Studies have been made as to these minimum essential needs on vehicles and parts and equipment under differing conditions. The only standard by which NSRB and the Munitions Board can proceed is the percentages of distribution of production during World War II. For instance, 88 per cent of motor vehicle and parts production went into military and export requirements. So did 92 per cent of automotive electrical equipment and 54 per cent of all types of batteries. The big problem is to determine whether the civilian economy could stand such a drain in any future all-out effort.

If World War III should come, current thinking leans toward a stop sales order rather than an immediate stop production order for the automotive industry. This thinking is again based on minimum essential civilian needs for vehicles. If put into effect, civilian vehicle production would continue until inventories were exhausted or war orders filled the lines.

ICC Needs More Money for Probes

The Interstate Commerce Commission indicated recently that it might undertake the investigation of long-haul trucking requested by the nation's railroads and the grain trade. (CCJ, June, Page 35.) The ICC intention, however, is based on Congressional approval of funds for this investigation and one involving the railroad passenger deficit situation.

Testifying before the Senate Appropriations Committee, ICC Commissioner C. D. Mahaffie said, "these two large and involved investigations" could not be handled by the Commission even if the full 1951 appropriation requested was approved. He hastened to point out, however, that the Commission "contemplated requesting the Bureau of the Budget to submit to Congress an estimate of appropriation to conduct these investigations."

Truckers Stand to Gain L.c.l. Loads

Broad transportation controls are not part of current planning. A general outbreak would find comprehensive controls applied rather quickly. Much detailed planning along these lines has been done at NSRB. The role of the trucking industry in World War II has not gone unnoticed. For example, current thinking would call for an order prohibiting railroads from hauling l. c. l. traffic on short runs.

All-Out Mobilization in Readiness

In the event of all-out mobilization, as distinguished from the present effort, the situation would change radically. Major producers in the automotive industry already have been given "production schedules" by the military. A mere flick of the wrist is all that is required to turn these into firm orders. But even then, the trucking industry would not have to worry about its minimum essential requirements. This is due to two factors: (1) a better realization of the important role played by trucks, and (2) World War II experience which showed clearly that there is a minimum essential need for civilian vehicles.

(TURN TO PAGE 222, PLEASE)

PACIFIC BEARINGS COMPANY HELPS KEEP 466 TRUCKS AND EQUIPMENT UNITS ROLLING

Cantlay & Tanzola and Western Truck Lines operate one of the biggest fleets in the West. Diesel trucks, line truck boxes and tanks add up to 466 units that operate through the mountains and the desert. They travel through blizzards and in temperatures as high as 130°—but they reach their destinations on schedule.

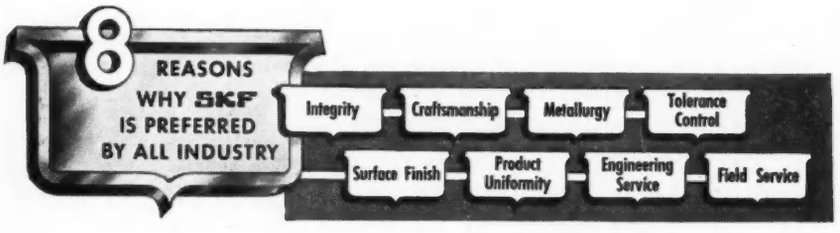
Prompt, efficient service from their SKF Distributor, Pacific Bearings Company, is an important factor in helping the fleet maintain its dependability.

You, too, will find that your SKF Distributor is a good man to know. He and his men know bearings and are always willing and able to help you put the right bearing in the right place. **SKF** INDUSTRIES, INC., PHILADELPHIA 32, PENNSYLVANIA—*the Pioneers of the Deep Groove Ball Bearing, Spherical Roller Bearing, Self-Aligning Ball Bearing.*

7138

SKF

BALL AND ROLLER BEARINGS



LAUGH IT OFF

FREIGHT RATE CLERK: "IT TOOK ME TWELVE LESSONS TO TEACH MABEL TO SWIM."
BILLING CLERK: "WHY, THE LITTLE FLIRT! I TAUGHT HER IN SIX."

CCJ

Brake Specialist: "Do you realize that your wife is telling everybody she meets that you can't keep her in clothes?"
Ignition Specialist: "That isn't the half of it, man; I bought her a home and I can't keep her in that, either!"

CCJ

The Truck Dispatcher's little boy, Bennie, was all agog with excitement. Today was to be the red letter day. Today was to be the day when he and his third grade classmates would draw pictures and write letters to boys and girls in foreign countries. The teacher gave out the names and addresses, and little Bennie got a girl in Holland for a pen pal.
That afternoon he bounced into the house, and said merrily, "Guess what, Mother? I can't wait to tell Pop. I got a girl in Dutch!"

CCJ

STENO LOU: "Well, I finally got a raise in salary."
STENO SUE: "Honestly?"
STENO LOU: "Oh, don't be so darned inquisitive."

CCJ

Real Estate Salesman: "Would you like to see a model home first?"
Automotive Parts Man: "I'd be tickled to death to oblige. What time does she quit work?"

Did you hear about the Garage Operator who decided to reform? The first week he cut out tobacco. The second week he cut out drink. The third week he cut out women. The fourth week he —*Cut Out Paper Dolls.*

CCJ

SHE'S GORGEOUSLY STACKED;
A VISION TO SEE!
SHE'S BUILT TO ATTRACT
SIGHTSEERS LIKE ME.

"I don't believe I've seen any terminal quite so mechanized."

First Mechanic: "I got an awful fright on my wedding day."
Second Mechanic: "Yes, I know. I saw her."

CCJ

Safety Sadie Says: "The proper foundation garments, a sleek gown and a smooth paint job may take twenty years off a gal's true age, but it sure is mighty difficult to fool a long flight of stairs!"

CCJ

The cross country van driver had an unusual run of good luck on the slot machines at a juke joint on his route, so he decided to brush up a little and seek out the fanciest eating place in the little South Georgia town he was passing through and blow himself to a swank meal. He ordered the $2.40 dinner from a colored waiter. When he had finished off the excellent repast, he called the waiter and gave him three one dollar bills in payment. The waiter returned the change—a fifty cent piece and a dime. The van driver looked first at his change and then at the darky's face. He rose from the table, took a deep drag on his cigarette and then glanced at the waiter again with a cool eye, picked up the half dollar and started out.
"It's all right, boss," said the waiter as he grinned from ear to ear. "I wins mo' times than I loses."

CCJ

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(Resume Work)

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7138

SKF
BALL AND ROLLER BEARINGS

8 REASONS WHY SKF IS PREFERRED BY ALL INDUSTRY

Integrity — Craftsmanship — Metallurgy — Tolerance Control
Surface Finish — Product Uniformity — Engineering Service — Field Service

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(Resume Work)

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NEW

NEW MILEAGE

Looking for new ways to get more tire-miles for your money? See the new Gillette Super Traction. See how Gillette engineering puts a 50% deeper tread, with uniform load over double-anchor mileage lugs and gives more miles at lower cost in almost every hauling situation.

NEW TRACTION

Bad roads, detours, slippery highways, and off-the-road pickups don't bog down the Gillette Super Traction. Deep, sharp, scientifically angled traction lugs bite from shoulder to shoulder. Staggered center groove and sharp shoulder edges block skids and improve traction. With Gillette Super Tractions you prevent delays, improve on-time performance, keep customers and drivers happier.

NEW CARCASS

Gillette's radically new round carcass design molds the tire in the natural shape it assumes in operation. Carcass fatigue and strain are lessened; tire life increased. You get better tire performance, fewer failures, more recaps.

WANT THE FULL STORY of how these new Gillette features improve truck performance at lower cost? Call your Gillette Tire Distributor for the details of the sensational

A BEAR FOR WEAR

GILLETTE TIRES

DIVISION OF
UNITED STATES RUBBER COMPANY

NEW DOUBLE-DUTY

GILLETTE SUPER TRACTION

WEAR BETTER BECAUSE THEY ARE BUILT BETTER!

FIG. 1. Every "Freighter," as Consolidated's drivers are known, is furnished with a 55-page manual. FIG. 2, below, pledge signed by new men

Form 721
3/48

CONSOLIDATED FREIGHTWAYS, INC.

TRANSPORT OPERATORS' PLEDGE

While I realize that there are many more obligations connected with my job, as a Transport Operator, than there is room to enumerate here; I am sincere in my desire to be a credit to Consolidated Freightways. I wish to go on record, at this time, that I am and will do all in my power to remain anxious to discharge these obligations to the best of my ability and in this connection:

1. I will report for work regularly on time.
2. I will check my equipment completely before departing.
3. I will eliminate all unnecessary stops enroute.
4. I will observe all local traffic laws.
5. I will keep safety uppermost in my mind at all times.
6. I will familiarize myself with Company policy as contained in the Transport Operators' Manual, bulletins and instructions from my supervisors; and live up to it at all times to the best of my ability.
7. I will do all in my power to help my Company in rendering a Quality Service to customers by
   (a) Making courtesy a part of my daily work.
   (b) Keeping down noise and smoke through towns as much as I can.
   (c) Checking freight bills against the markings on the envelope and against drivers' orders and load release.
   (d) Handling mail properly.
   (e) Handling way freight properly.
   (f) Protecting perishables properly.
8. I will fill out reports accurately, legibly and completely.
9. I will not stoop to making sarcastic or personal remarks on any report.

I sincerely pledge that I will faithfully observe all rules of safe driving practices, that I will do all possible to promote safety among my fellow workers and that I will attend all safety meetings when I am available.

_____
Signature

Witness_____ Date_____

Max R. Jensen, Consolidated's Superintendent of Transportation and Safety Director

CONSOLIDATED's Plan Makes Safe Drivers "Safer"

THE MANAGEMENT of Consolidated Freightways assumes that transportation safety is so closely tied in with general operating efficiency that the two cannot be separated. Therefore, for the training and supervision of its 1100 city and highway transport operators, the company does not have a safety department as such, or a safety director as such.

The promotion of highway safety is one of the basic duties of Max R. Jensen, superintendent of transportation. But when there is need that the company should be formally represented by a safety director, Jensen also assumes that title.

This is not to imply that Consolidated Freightways doesn't feature safety driving. To the contrary, back

(TURN TO NEXT PAGE, PLEASE)

CONSOLIDATED's Plan Makes Safe Drivers "Safer" Continued from Page 49

Advanced techniques in hiring and training are followed by close road contact, periodic meetings, "campaign literature," variety of contests and many other effective ingredients

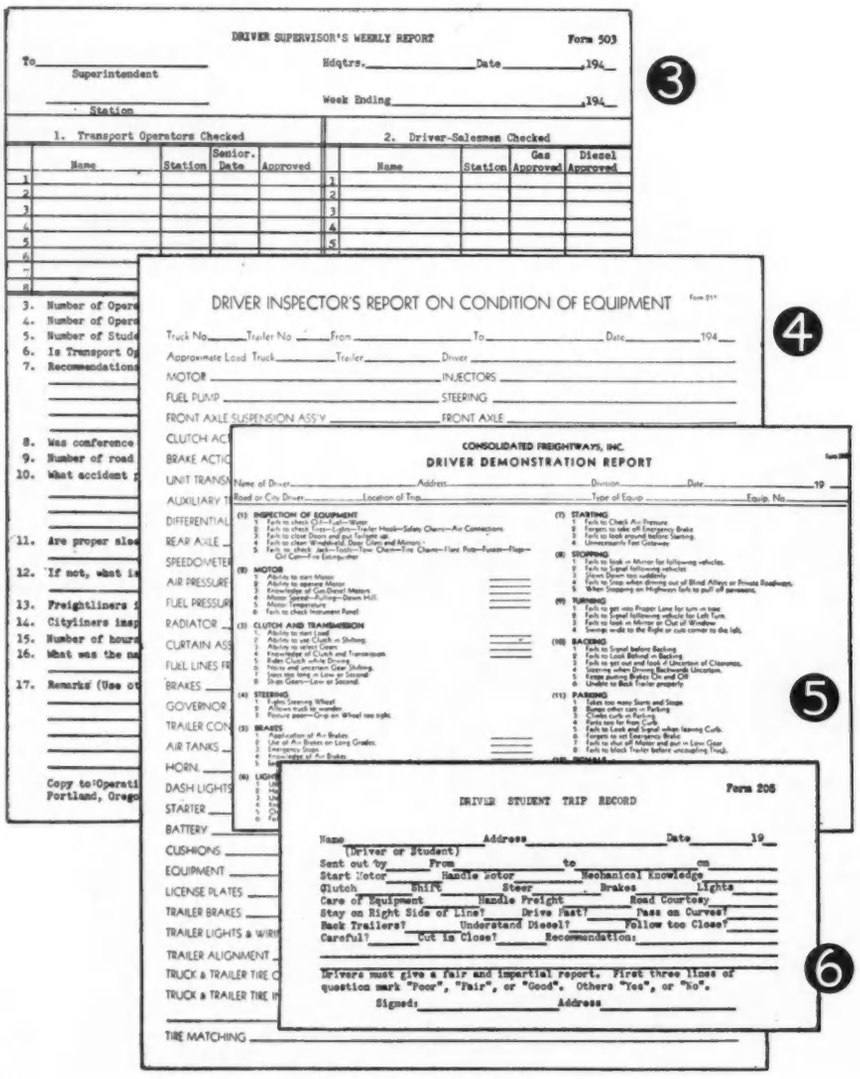
AS TOLD BY CONSOLIDATED'S MANAGEMENT TO:

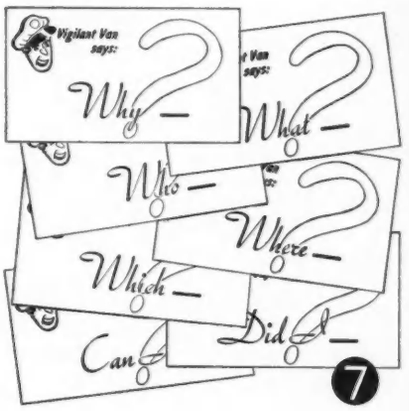
Randall R. Howard
CCJ Special Correspondent

Warren E. Crane and Tevis Miller

during the years of 1941, 1942, and 1943, Consolidated began to achieve national fame through three successive winnings of the Trailmobile Safety Trophy, an annual award made under the direction of American Trucking Associations.

Likewise, more recently, in the local area where Consolidated Freightways has its operating headquarters, the company was awarded the 1948 Grand Prize in the Commercial Fleet Contest conducted by the Portland Traffic Safety Commission. During the preceding year, Consolidated had won second place in this contest.





FIGS. 3 to 6, inclusive, are driver supervision forms used to keep new and old "Freighters" on their "toes." FIGS. 7 and 8, safety drive folders

Consolidated finds that its employee publication, right, builds good will and loyalty

ACTION

GOOD NEWS: "PLUS VALUES" BACK IN STYLE

BOISE DIVISION GOLD DIGGERS LEAD FLAG RACE

Other recent company safety achievements include high rank in the state-wide fleet safety contests of Wisconsin and Minnesota; and in the Oakland, Cal., chapter of the National Safety Council.

Among the older Consolidated drivers, a large percentage of them have outstanding no-accident awards. These include one operator who, in 20 years, drove 1,350,000 miles with only one chargeable accident.

Serving more than 12,000 miles of routes on the west coast and to Chicago, Consolidated registers an average of only 1.4 accidents per 100,000 miles, a 75 per cent decrease from the rate of four to five accidents per 100,000 miles in 1935 before the company's long range safety program was put in full effect.

All Accidents Analyzed

AN OVERALL company accident analysis report is prepared by Edward L. Hamm, head of the vehicular claims department, who carefully classifies each accident as to cause.

In 1948, Hamm's analysis of transport operators' vehicular accident causes showed misjudgment of clearance of stationary objects as the largest single source of accidents; 10.9 per cent of the accident total was attributed to this cause. Next highest in accident causes was "following too closely," to which 9.8 per cent of the total was attributed. Third in line was excessive speed, which accounted for 9.5 per cent.

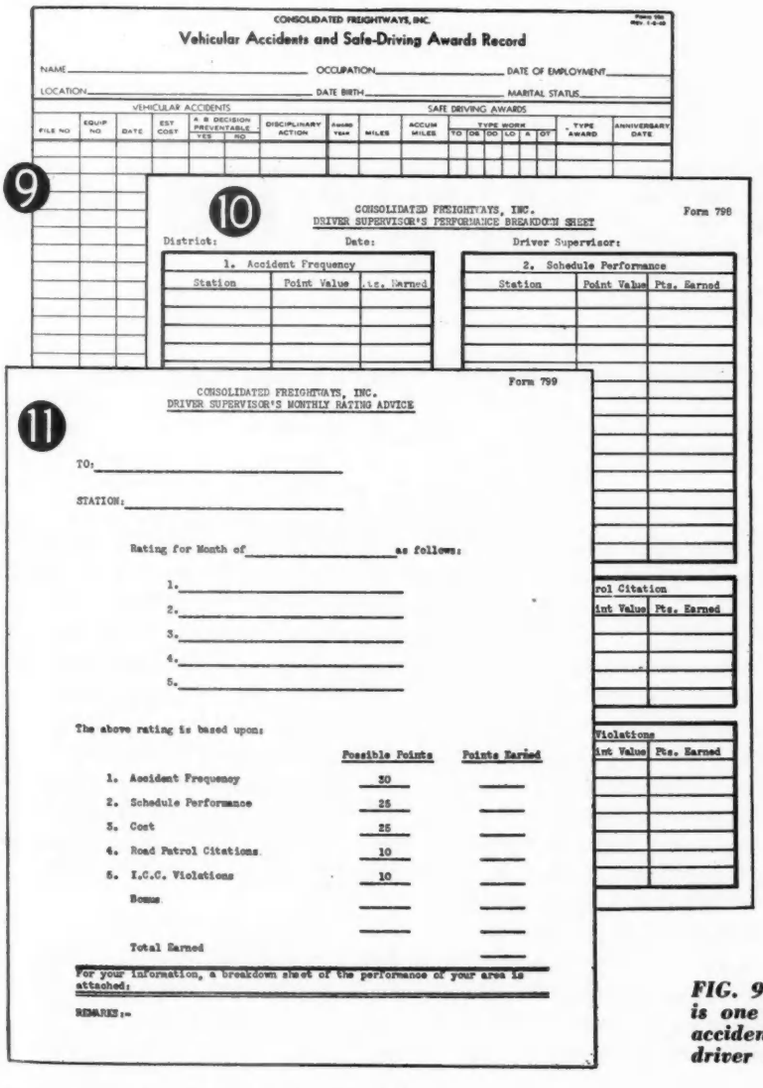
Other causes and their respective per cent relationship were: Out of control (ice, wet roads), 7.5; inattentive driving, 6.3; blinded by lights, 6; livestock on highway, 5.5; sideswiped, 5.2; crowded off road, 5.2; ran off shoulders, 5.2; turning from wrong lane, 4.6; miscellaneous, 4.0; improperly parked, 3.7; backing, 3.4; lost air, 3.0; passing when unsafe, 2.6; fell asleep, 2.6; driving on wrong side of road, 2.3; fire, all types, 2.0; mechanical failure, 2.0; pulling away from curb, 1.9; over-driving vision, 1.7.

These figures were taken from a complete tabulation of accidents, whether the responsibility was charged to Consolidated drivers or others. Drunken drivers running into Consolidated trucks, for example, accounted for 1.4 per cent of the total causes of crashes. Accidents to Consolidated's vehicles while properly parked were 1.7 per cent.

Accident Investigation Board

WHEN an accident occurs, detailed reports of the incident are submitted to a company accident inves-

(TURN TO PAGE 156, PLEASE)


9

CONSOLIDATED FREIGHTWAYS, INC.

Vehicular Accidents and Safe-Driving Awards Record

NAME _____ OCCUPATION _____ DATE OF EMPLOYMENT _____

LOCATION _____ DATE BIRTH _____ MARITAL STATUS _____

VEHICULAR ACCIDENTS | SAFE DRIVING AWARDS

FILE NO | EQUIP NO | DATE | EST COST | A & B DECISION PREVENTABLE YES NO | DISCIPLINARY ACTION | Accident Year | MILES | ACCUM MILES | TYPE WORK TO DR TOO LO A GT | TYPE AWARD | ANNIVERSARY DATE

10

CONSOLIDATED FREIGHTWAYS, INC. Form 798

DRIVER SUPERVISOR'S PERFORMANCE BREAKDOWN SHEET

District: Date: Driver Supervisor:

1. Accident Frequency

Station | Point Value | Pts. Earned

2. Schedule Performance

Station | Point Value | Pts. Earned

11

CONSOLIDATED FREIGHTWAYS, INC. Form 799

DRIVER SUPERVISOR'S MONTHLY RATING ADVICE

TO: _____

STATION: _____

Rating for Month of _____ as follows:

1. _____
2. _____
3. _____
4. _____
5. _____

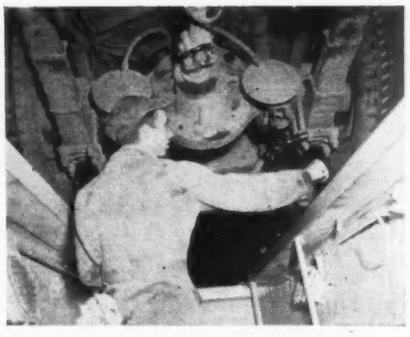
The above rating is based upon:

	Possible Points	Points Earned
1. Accident Frequency	30	
2. Schedule Performance	25	
3. Cost	25	
4. Road Patrol Citations	10	
5. I.C.C. Violations	10	
Bonus		
Total Earned		

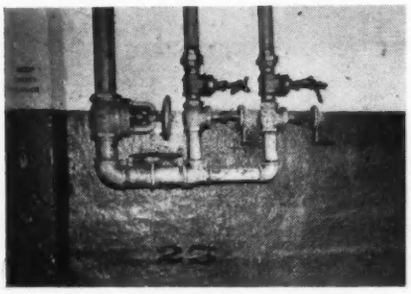
For your information, a breakdown sheet of the performance of your area is attached.

REMARKS:-

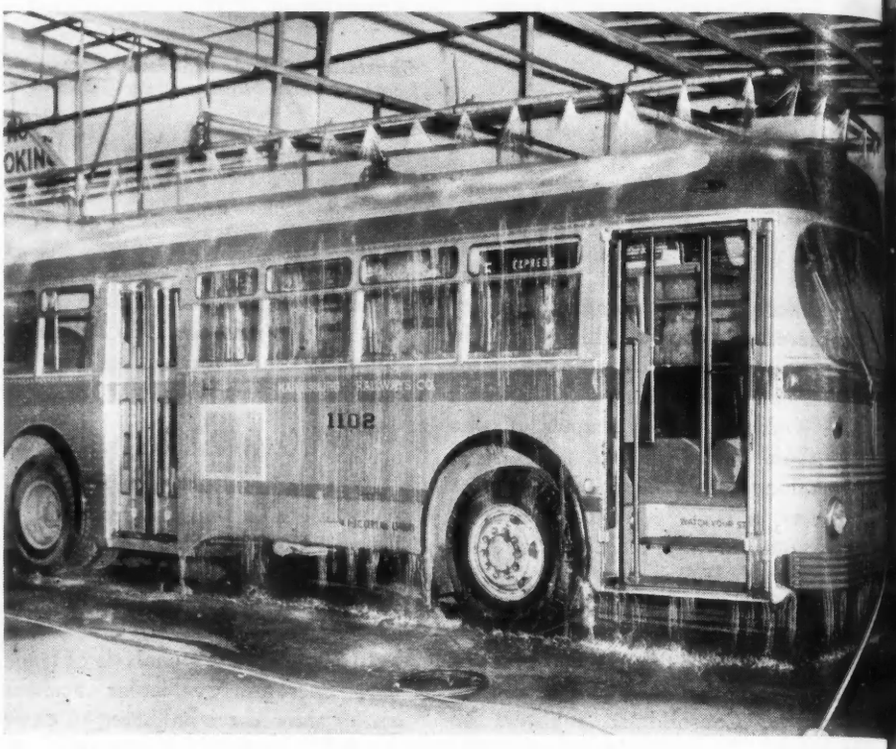
FIG. 9 is Consolidated's driver safety record card. There is one for each driver. It contains his entire record of accidents and awards. FIGS. 10 and 11 are forms used by driver supervisors in recording and rating safety contests



While one man inspects bus condition topside, another works below. This man sound-tests, with hammer, spring clips and bolts for breaks or fractures



Time-saving feature in wash bay is use of Walworth lever valves and handle extensions for fast opening and closing



Simple squeeze of lever valve gives bus wet-down shower. Another squeeze, shower stops and washers take over

Attractive Appearance

Harrisburg Railways' effective "spit 'n polish" program makes buses look attractive

EDITORS' NOTE—It seems to us that it is quite a compliment when one visiting busman asks another, "Howinell does Harrisburg keep its buses so clean on a night like this?" Thereby hangs a tale.

It was a murky, stormy night—a dog. Three men were waiting under a hotel canopy to hail a cab, when a brightly gleaming bus came along. They still waited for a cab. Then came another bus, and still another, every one having the appearance as if it just came out of shelter. Then a cab came along, but the men ran into the storm to board the bus. They had seen it, and its sisters, from the outside; they were impelled by curiosity to see the inside. Then came the remark quoted above. We give you the answer.

IN THE FACE of declining revenues, we are all man-hour and sales conscious, so I'm approaching cleaning from the angle that the appearance of our buses materially affects "rider appeal."

Every bus used in service is cleaned daily inside and outside, regardless of length of time in service. The operator coming off of regular or tripper service parks his vehicle, as directed by a man stationed at the rear of the buildings, where the buses must enter. Each bus then takes its place on our "assembly line" system.

First, all buses are swept out before going over the inspection pits—four men being used for this job.

For the inspections, two of our four pits are utilized at one time, each manned by two inspector's helpers. Buses are inspected in pairs, the pits being long enough to accommodate two buses at a time. One man inspects the upper part of the buses, condition of seats, stanchions, lights, horns, doors, windshield wipers, safety equipment, etc., while the other man underneath the buses checks the oil, tires, brakes, looks for loose nuts and faulty equipment.

After inspection, the buses are moved onto the washrack and the following two are moved onto the pit. As you can see, this operation really is on an assembly line basis.

Basic Cleaning Routine

BUSES move off of our four inspection pits onto one of two washracks, equipped with overhead spray and fountain brushes manned by a

The showers (two) are of own design and construction. Four washers, with fountain brushes wash in 16 man-min.

Boosts "Rider Appeal"

and keeps them that way—even in foul weather

By John C. Tuten
Assistant General Manager
Harrisburg Railways Co., Harrisburg, Pa.

crew of four men and/or women. This crew turns out a good wash job in four minutes—16 man-minutes.

Buses used in daily service are washed each night, except when the weather permits a good dry cleaning to do the job. At such times, when dry cleaning will suffice, the entire exterior is dusted with rags moistened with O-Cedar Oil; and, generally, the wheels are washed.

Interior dusting is done with rags and a very handy mitt, manufactured by the Fuller Brush Co., called a mitten-duster. These mitts cost $1.04 each, but can be laundered time and time again.

To continue the assembly line process, the bus is then moved off the washrack by one of two shifters (perhaps some of you call them hostlers), who then gases the bus and parks it in its designated location inside the barn, where it remains until the next morning. However, in case the bus needs repairs—other than very minor repairs, which are done on the pits—it is held out in or near the repair shop.

The wash team of four persons moves between the two washracks in use, keeping abreast of the buses released by the two teams of inspectors, consisting of two men each.

After four hours of washing, the first four washers have a lunch period. Then they exchange places with the four men working on interior dusting, sweeping and washing; who then take over on the wash racks.

Supplementary Cleaning Routine

IN ADDITION to the basic nightly cleaning routine, a certain number of buses are scheduled for floor scrubbing, window washing and interior ceiling washing each night. Also, each night two buses are washed inside completely. In addition to daily window washing, all floors are wet-mopped over each week-end. In inclement weather all windows are washed each night.

Certain cleaning functions also are performed by the day shift. Each bus on morning tripper service is swept out when returned to the garage. A certain number of step wells and the floors around the drivers' seats are scrubbed with F-100, and a number of ceilings and windows are scheduled each day. This work is done by two men, who, together, have 84 years service with the company.

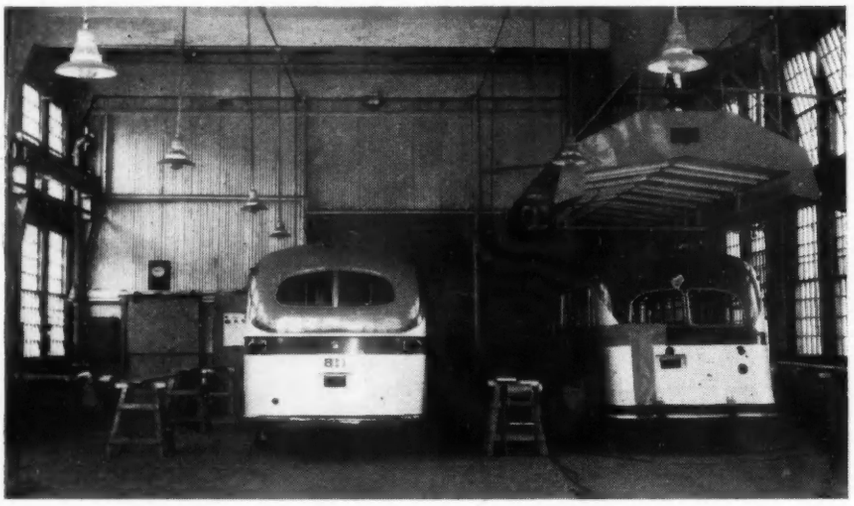
We have 18 cleaners on the payroll. Of these, seven are women. Four of the men are in the pensioner group, hired during the war to keep the placing going, or employees from other departments who could no longer do their former work.

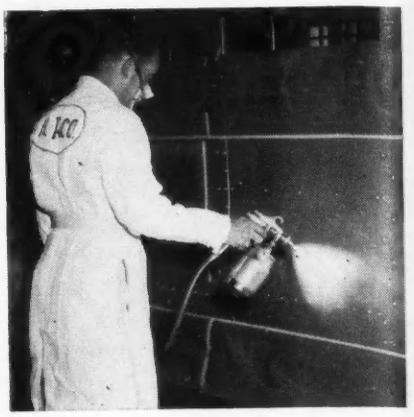
Eighteen employees, with one day off each week for men and two days off weekly for women, add up to only 101 man-days per week, or 14 3/7 cleaners per night. Of these, two are

(TURN TO NEXT PAGE, PLEASE)

. . . Attractive Appearance

Continued from Page 53





After good priming, each bus gets two coats of aluminum paint. Three hours later it gets its first coat of varnish. Nine hours later, a second coat

Paint shop is simple, roomy, efficient. Bay at right has large canopy with an exhaust system to draw off fumes

shifters, one is a tireman and the balance are washers and inside cleaners. In addition to regular nights off, the night clerk and night watchman are relieved on their nights off by cleaners.

Our nightly cleaning and washing, labor only, costs approximately $115.00 per day.

Washing Aids

IN OUR nightly exterior washing we use no agents other than water, fountain brushes and elbow grease. In the interior scrubbing, we use F-100. It comes in 275-lb drums, and costs around $11.80 a hundred. I'd say we use a small handful of the powder to 10 quarts of water.

To clean windows at night, we use ammonia. For day window cleaning, in the paint shop, they use Hurkleen—available locally at $1.65 a gallon—which proved more effective in taking off masking paste.

The job of sweeping buses has been eased considerably by the introduction of our trash bag. They're made in our own shops from white duck, then sprayed to match the bus. About 10 in. wide and 12 in. deep, they hang near the instrument panel at driver's left and provide a convenient place to put transfer ends, etc.

A, B, C Cleaning Inspections

OUR cleaning schedule includes Class A, B and C inspections, which range from housecleaning to complete paint jobs. These inspections, performed in our paint and body shop, include scrubbing and washing of interiors. They utilize one man's labor full time, and about two days a week of another employee's—a woman who, incidentally, also does most of our interior painting.

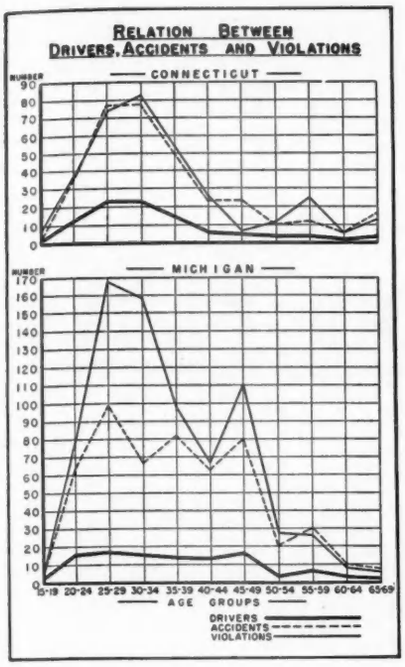
Our buses are completely cleaned on the underside before each inspection. This is done with the aid of two steam jennys, using well known cleaning compounds on major inspections. They are later sprayed with Aluminum Tankote with aluminum undercoating.

Walls of inspection pits are painted white and floors gray. This paint must be renewed at frequent intervals. However, it is considered a worthwhile investment, as the men take a real interest in maintaining the cleanliness of the pits.

The life of our paint jobs is extended by interim coats of clear varnish applied over the old surface which has been well cleaned. This procedure can be followed only when old finish has not yet started to disintegrate. All damaged surfaces first are repaired by sanding and repainting the entire panel. No patching jobs are done, with the exception of entire panels.

Our painting procedure is an established routine followed on all makes of buses, regardless of age. Fenders, wipers, horns and lights are removed, cleaned and repaired where needed. Fenders and underframes are insulated and fixtures removed, sanded and repainted. Glass is replaced where cracked or discolored. Body damages are repaired and door cables and rubber replaced where needed.

The entire exterior is sanded, spots primed, glazed and surfaced. Windows are masked with masking compound, and the bus is sprayed with two coats of aluminum paint. After approximately three hours, the first coat of clear varnish is applied. The bus then is permitted to dry for nine hours, when it is sprayed with second coat of varnish.



"Show me a man who has repeated violations, and I will show you a man who is "out looking for an accident," said Dr. Stack, as he enumerated characteristics of accident repeaters. Table above, showing relation between drivers' violations and accidents, is based on studies in Connecticut and Michigan

How to Handle Accident Repeaters

The repeater may be suffering from some psycho-physical maladjustment or rusty safe driving techniques. A corrective retraining program should be beneficial

By Herbert J. Stack
Director, Center for Safety Education
New York University

EDITOR'S NOTE—This article was excerpted from a paper presented by Dr. Stack at the recent Greater New York Safety Conference.

ACCIDENT-REPEATERS have the following general tendencies:

1. They are poorly informed regarding safe driving practices, rules of the road, and general safety "know-how."

2. They are poorly adjusted and emotionally unstable: They tend to "go to pieces," "blow their top," get excited, especially in emergencies.

3. They have poorer attitudes than the accident-free. To mention but a few revealed by the study, they prefer higher driving speeds, tend to be more reckless, have an enlarged idea of their ability to absorb alcoholic liquors, and are not in favor of enforcement. Some of the Connecticut repeaters said that they could take as many as eighteen cocktails before their driving would be affected. They must have some strong constitutions up in the Nutmeg State!

4. They tend to have poor physical coordination.

5. They have a record of repeated violations; violations and accidents go hand in hand. Show me a man who has repeated violations, and I will show you a man who is "out looking for an accident"! We sometimes say that the violation is a symptom of an accident.

6. Many repeaters appear to be drivers with past accident records. Sometimes we find that they will have several accidents during a period and get over it, much as one recovers from a disease. There are various explanations for this. Sometimes it is due to mental illness, family problems, or to financial difficulties. When hiring new drivers, efforts should be made to secure the applicants' accident experience.

7. From the standpoint of vision there seem to be no striking differences between repeaters and the free. The same can be said for blood pressure. Though more cases of poor vision will be found among repeaters, the differences are minor. This does not mean, however, that good vision is not important in driving, or that fleets should not include vision tests. Often visual defects that are discovered in examinations can be corrected, and this should be followed by improved driving.

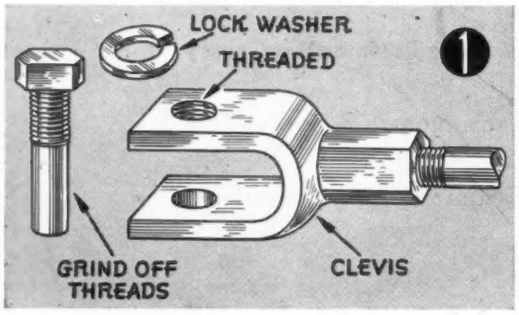
Up to this time we have not mentioned *accident-proneness*. There is a difference between accident-prone drivers and accident-repeaters. The "prone" are those who tend to have accidents because of physical or psychological characteristics, or weaknesses in personality. Repeaters are those who have had repeated accidents, but whose accidents may be due to high mileage exposure, difficult driving conditions, and the like, rather than to defects in personality. Theoretically, a driver could be accident-prone yet have no accidents, because of low annual mileage.

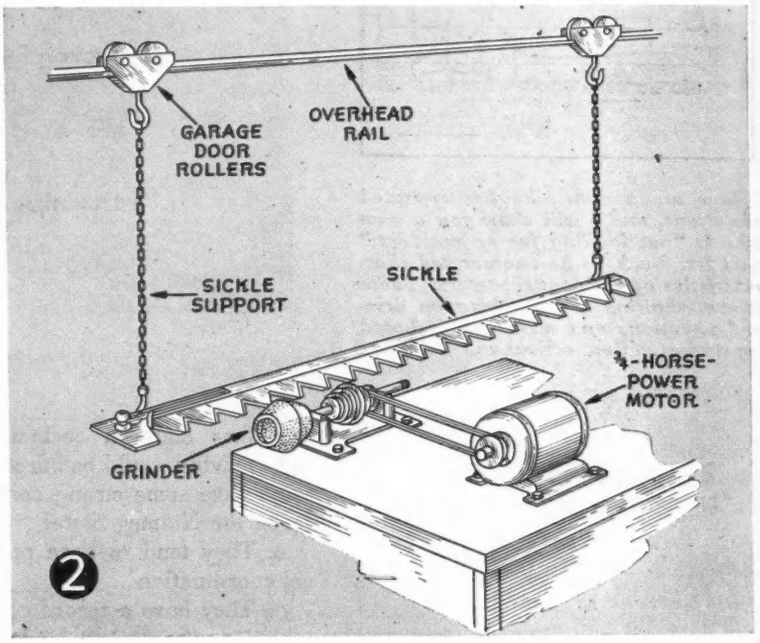
Dealing with Repeaters

IN THE preparation of this program we have consulted several fleet supervisors, particularly to determine the practicality of the recommendations. Because of the variety of fleet organizations, what works well in one will not in another. The size of the

(TURN TO PAGE 146, PLEASE)

Shop hints from FLEET





1. Clevis Modification

by Edward W. Neibauer
Neibauer Bus Co., Bristol, Pa.

Enclosed is a drawing of a clutch cylinder piston rod clevis and pin as used on the GM 91 hydraulic transmission, modified to provide for the locking of the pin. This will eliminate frequent trouble with loosing such pins.

The upper portion of the clevis is tapped with a 9/16-in. SAE thread. Then a 9/16-in. x 1½-in. SAE cap screw is placed in a lathe and cut to ½ in. diameter to within ½ in. of the head. This cap screw is then threaded into place with a 9/16-in. lock washer to hold it firmly in place without putting pressure on the lower section of the clevis.

2. Sickle Grinding Tip

by Gail S. Rogers
Jackson Street Garage
Cuyahoga Falls, Ohio

We have built an outfit which greatly simplifies the sharpening of the sickle knives used in our road work. This jig not only saves time, but it also saves many an accident resulting from handling these 6-ft. bars.

The bar is simply swung from two chains which are in turn suspended from two garage door rollers. These travel on an overhead rail which is made up from two sections of angle iron. With the knife cradled in the hooks the blades can be sharpened one at a time over a regular grinding stone powered with a ¾ hp motor through a V-belt and reduction pulley.

3. Spare Bulb Holder

by Charles Grifall
Mountain View, Cal.

We have had considerable trouble carrying spare fuses and light bulbs in our trucks, so I rigged up an inexpensive holder to insure that they are present—and are undamaged when needed.

Take a piece of 2-in. radiator hose 4 in. long and cut ¾-in. crosses in it as shown. Insert a bulb or fuse, and you can be sure it will stay there. The hose is attached with a screw or stove bolt to the inside of the cab in any out of the way spot.

4. Home-Made Pry Bar

by F. A. Ulmer
Wholesale Meat Dealer
Philadelphia, Pa.

Old gear shift levers make excellent pry bars for brake work, body work and general maintenance details. Just cut off the lower tip approximately 4 in. from the bend and grind it to a

$25 FOR THE BEST HINT PUBLISHED EACH MONTH • • •

$5 FOR ALL HINTS PUBLISHED EACH MONTH

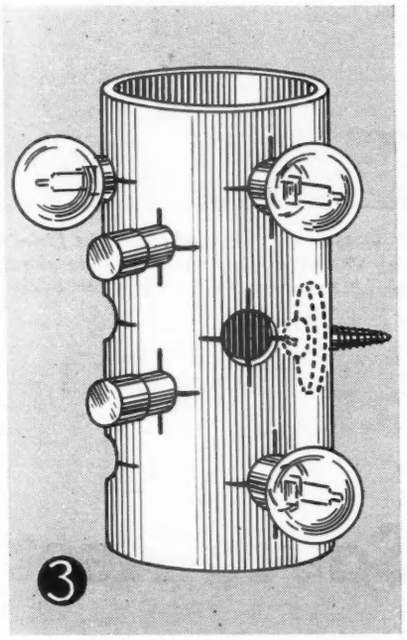
SHOPS

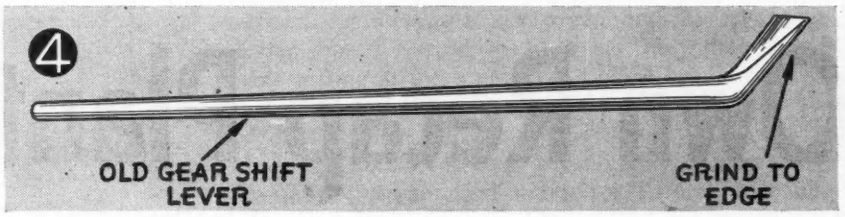
WHERE'S ELMER?

Elmer used to read the shop hints, and then swear he could improve on any one of them. Then he'd sit right down and work up a new tool, short cut, modification or service tip that would prove it. Then he'd write CCJ and show it. And CCJ would print it—and the boys would like it.

But where's Elmer, damn it. . . and many more of our shop hint contributor friends? True, we've found several lying in the shade of a front fender these hot summer days, but they vowed they were thinking up another idea for us. So here we sit waiting for the mail.

A $5 bill is pretty good pay for five minutes with a pencil and paper. But you may also hit the jackpot with a $25 award for service beyond the call of duty. Don't wait for Xmas. Write the Tech Editor —today!





flat edge as shown. This piece has just enough temper to keep it from bending under moderate strain, and it is not as brittle as are some other salvaged part used for chisels and bars.

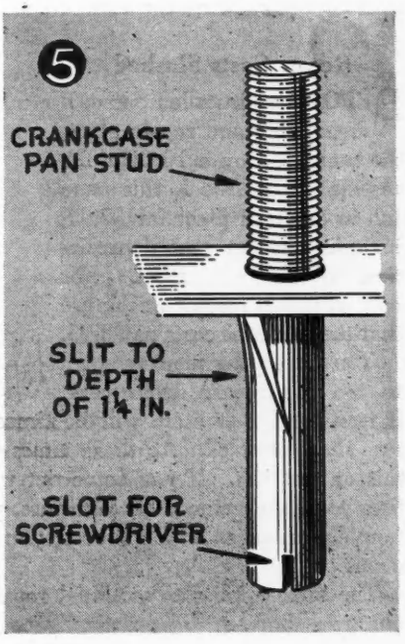
5. Pan Installation Aid

by Herman Duchin
Lansdown Auto Service
Philadelphia, Pa.

Installing heavy crankcase pans on some vehicles and heavy trucks is quite a trick since you have to align the pan and gasket and start the bolts while holding the heavy pan. Here is how we simplify the job.

Thread a 4-in. bolt to the same threads as the regular pan bolts. Just below the thread section slit the stud body with a hacksaw to a depth of ¼ in. as shown in the drawing. Spread this lip slightly to cause it to project beyond the diameter of the stud. Then notch the lower end to fit a screwdriver blade.

When you are ready to mount the pan, start one or two of these guides at one end. Slip the crankcase pan over the slit section and let it rest on the protruding lip until you have started the studs in the other end. The pan will slip over this fish hook projection but there will be enough strain in the lip to cause it to expand, holding out against the shoulder of the pan. Remove the guides and insert the regular studs.



Own Recap Plant Saves Fleet

Other advantages include improved quality recap, which has reduced road failures and accidents, and use of previously unwanted section repairs. New tire use greatly cut

A tire "reborn." Here is one of Alabama Freight Lines' old carcasses coming out of a Bacon mold. This plant handles 9:20 to 11:12 tires. A 10:22 cap costs $7.90

AT OUR Phoenix shop, we service over 100 pieces of road equipment. Including the tire repair department, we have 19 on our maintenance personnel list.

Our tire repair shop is in a separate building. This shed-type sheet metal building is 20 by 40. The tire department has a personnel of two; a foreman and a helper.

Our equipment is complete and consists of the general pieces found in any up-to-date recapping plant.

For example, we have two recapping molds, half dozen section molds, a large power buffer, portable buffers, two spreaders, etc.

Our entire tire program is one of experiment—the cut-and-try method—and we are confident that we have gained substantial tire mileage by staying "open minded."

We keep an on-and-off, brand number, location, full failure information, and complete repair data tire record. We use standard tire forms for this.

Recap Costs Slashed

BEFORE we installed our own recapping and repair plant, the recap job on a 10:00 x 22, cost us $19.50. We do this same job in our own plant for $7.90, including labor, and depreciation for the equipment. For our average recap, we figure that the material costs us $3.95.

You have your men assigned to the tire repair department. It is natural that there will be times when work in the tire shop is slack. At those times you suggest trying this or that job. If you come out with a good repaired tire, you have gained. If you miss, your loss is just the four dollars or so which it costs you to make the experiment.

The same applies to sectional repairs. Before we had our own shop we did practically no section work at all. If a tire needed this work it was junked. Now, we have the time and equipment and, besides experimenting, we turn out an average of 25 satisfactory section jobs a month; this as against 100 recaps per month.- Sectioned tires go on dollies and trailers only.

Another reason for the better experience when the work is done in your own shop: You use a baking method and a type of material which is tailor made for your

Tire section expert Frank Tool checks a tube while Robert Gibson works on cap before vulcanizing. Building at upper right is recap plant. Size: 20 x 40 ft

$1000 a Month

By Kerry L. McGuffee

Superintendent of Maintenance, Alabama Freight Lines
Phoenix, Ariz.

Kerry L. McGuffee

particular kind of operation and equipment.

The following is our new-tire-on record for the fleet since we put in our own recapping plant:

	1946 New Tires On ('45-'46)	1947 New Tires On ('46-'47)	Gain (Over '46)	1948 New Tires On ('47-'48)	Gain (Over '47)
August	51	31	20	27	4
September	24	19	5	13	6
October	32	13	19	17	(4—)
November	30	26	4	22	4
December	40	30	10	24	6
January	17	16	1	15	1
February	27	15	12	16	(1—)
March	34	9	25	12	(3—)
April	37	11	26	8	3
May	34	21	13	18	3
June	39	17	22	11	6
July	28	14	14	14	0

To me, two facts are evident from this record: We are using more recaps than we formerly did when we farmed out all our repair work; and we are doing a better job of retread work in our own shop than we were getting at the commercial plants.

There are several reasons for both of these. I think all fleets, where the tire repair is handled in the fleet shop, are able to cut down substantially on new tires-on. You have the equipment and you will try a recap job on a carcass which you would not send out to a commercial shop.

All of our operation is on top grade highways. Therefore, we can give our recaps a longer cure than the average. Time is no object to us in our shop output. We spend more time in buffing our tires. A carcass may be put on the spreader and inspected half a dozen times before it is decided to make a section repair or recap the tire.

What I am trying to explain is this: In tire repair, the way we handle it, the result is a special custom job which has been given every advantage in its repair, and has been repaired to our own specific requiirements. The difference is that of a hand-me-down, as against a tailor-made suit.

In a good many cases, our new tire mileage is not as great as it was before we had our own recapping plant. Then, we sent off the carcass for recap when it was smooth and no longer safe for the road. Now, we recap when we feel we can get the best job, and the longest overall mileage for the tire's entire life.

We brand all tires. Our branding method is simple. Each tire is branded when it is taken from our stock and placed on a wheel. The brand consists of the letters A-F-L (Alabam Freight Lines) and numbers for the

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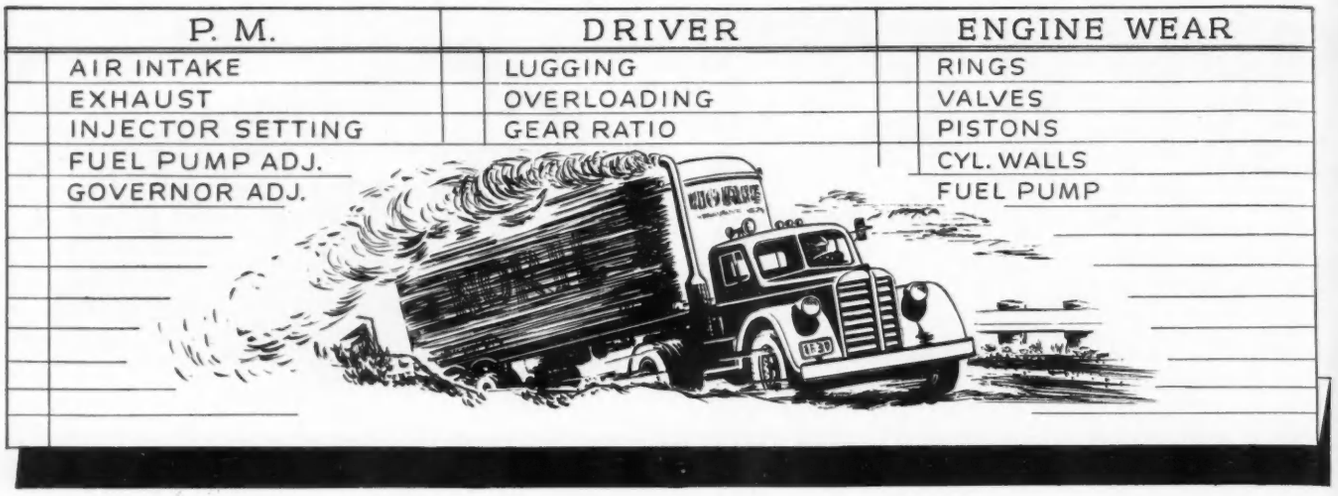

Factors Affecting

SMOKE AND NOISE IN

PEAK power output of the diesel engine goes hand in hand with accurate adjustments, intelligent operation and sound maintenance practices. Smoke and noise are directly tied in with the same factors. Excessive exhaust noises, diesel fumes and smoke can be controlled then by close attention to service, driving practices and loads, and operating efficiency will be the reward.

Periodic tune up of the diesel engine is just as important as it is in a gasoline engine, though adjustments need not be made as frequently in most cases. Once adjusted the diesel fuel system will promise many miles of satisfactory operation, but once out of kelter the operator will pay dearly in power losses, high fuel consumption and excessive smoke.

When power falls off, it can be the result of any of three conditions: improper engine adjustments, insufficient or improper fuel, insufficient air. It is obvious that the most common cause of insufficient air reaching the combustion chambers is a restriction in the air intake. Air cleaners are the most vulnerable and should be checked first. That is why manufacturers insist that the intake air cleaner be removed at least every 50,000 miles for a thorough cleaning with steam or solvent. Connections, gaskets and lines from the intake air vent to the engine manifold should be checked for leakage frequently and when power output drops.

After the entrance of clean fresh air is assured, checks should be made to see that the exhaust system is clear, for excessive back pressures can cut power as much as 10 per cent. Restrictions in the system may be found at the tailpipe, bent through collision; at the muffler, restricted through carbon formation or an accumulation of rust and scale; at the exhaust pipe, kinked through vibration and jarring.

Poor engine compression contributes to power losses when blowby past the rings or restricted valving hinders the proper entrance of air to mix with the fuel spray. Sticking intake valves, leaking valves, worn rings, scored cylinder walls are frequent causes of poor compression.

In this connection it might be well to mention that any measures taken to insure a large supply of clean cool air will enable the operator to enjoy full power output. Air cleaners, when not factory installed there, can be mounted outside the engine compartment to obtain cooler air which is richer in oxygen. Some fleets have fashioned air scoops on the intake pipes to secure greater volume.

Another cause of insufficient power is lack of fuel, and clogged strainers are the first units which should be checked as a possible cause of this trouble. The diesel may use a series of fuel strainers in order to insure clean supply at the injectors and each should receive periodic attention at around 5000-mile intervals.

Insufficient fuel at the combustion chambers may be due to clogged orifices in the injectors, when carbon or dirt restrict proper dispersion. Sticking injector plungers, also, contribute to this condition. Sticking plungers may result from uneven tension in the hold down nuts in some

Periodic tune up, precise fuel and air adjustments, proper fuel and oil, intelligent driving methods and observation of load limits will cut operating and maintenance costs

By M. K. Simkins
Technical Editor, Commercial Car Journal

Horsepower

DIESEL ENGINES

makes of diesels. Use of too light a fuel with improper lubricating qualities may contribute to this condition. Damaged injectors, with burrs or misaligned assemblies will cause sticking. And, of course, dirty fuel will gum up the mechanism. If cleaning does not correct the condition, the complete assembly should be replaced.

Low fuel oil pressure, one of the causes of insufficient quantity of fuel being injected into the combustion chambers, may result from the use of poor quality fuel oil, congealed fuel, leaks in the suction lines. Wear in the fuel pump itself on some engines will reduce pressure at the injectors. Restrictions in the lines, air leaks, however, are more common.

It is well recognized that proper amounts of fuel and air will do no good unless both reach the chamber at the proper time. Timing and distribution are functions of the pump, which may be supplying fuel either too early or too late. Adjustment can be easily made in the fleet shop. However, improper timing may result from worn racks, defective injector plungers, wear in the governor which does not permit full opening of the racks for full fuel flow. Worn governors should be checked and recalibrated only by authorized personnel.

Smoke

EXCESSIVE smoke arises from incomplete combustion and may be classified as hot or cold. Either is harmful to the engine as it gives rise to carbon formation and engine deposits. In addition smoke is indicative of high fuel consumption and poor power characteristics. Most causes of smoking exhausts arise from overloading, overcooling, lugging on hills, improper fuel injection timing.

Grey smoke appearing at idle generally results from cooling down of the engine. With the higher thermal efficiency characteristic of the diesel engine, less heat is thrown off in the combustion process, so that there is more tendency for overcooling of the cylinder walls and combustion chambers than in the gasoline power plant. Accordingly an engine designed for full throttle operation under rated loads, will tend to overcool when idling for short periods or even when coasting down hills. For this reason the driver should be more solicitous of the temperature gage reading, using shutters or other devices when low temperatures are indicated. In cold weather engine idle should be set up, thermostats should be checked frequently and necessary measures should be taken to insure adequate running temperatures—if cold smoke is to be eliminated.

Other factors sometimes causing this type of smoking exhaust are poor compression, improper fuel oil, water or oil in the fuel and overlubrication (and overcooling) of the cylinder walls.

Black smoke appearing at full throttle is usually the result of fuel troubles, when distribution to the combustion chambers is either too rich or too lean. Improper timing (early) will be indicated by not only power losses and smoke but a fuel knocking as well, while late fuel feed may be indicated by smoke and power loss without the characteristic knock. Dirty injection nozzles, defective injection pumps, and clogged air cleaners contribute to smoking in that they restrict proper supply of fuel to the combustion chambers. Use of an improper grade of fuel oil, or water in the fuel will result in smoking.

These factors are a result of engine conditions. However, the driver and the loader come in for their share

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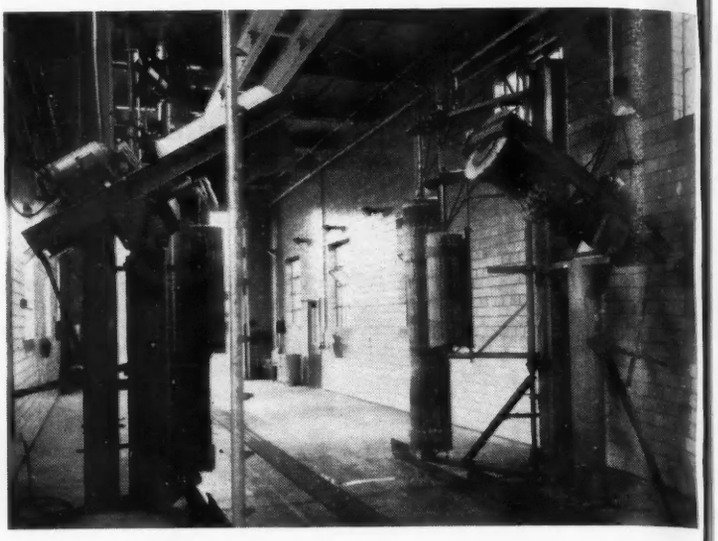
Automatic washer developed by U. S. Washmobile uses a nozzle-equipped arm traveling over its own track for the length of vehicle and providing a spray



The Ross & White bus washer (also adaptable to trucks) provides a wetting spray, a washing spray and a rinse with rotary brush action for agitation

Wash Down Costs with the Right Wash Up

A round up of fountain brushes, power washers and stationary washing equipment shows advantages of each type in terms of costs, labor, time

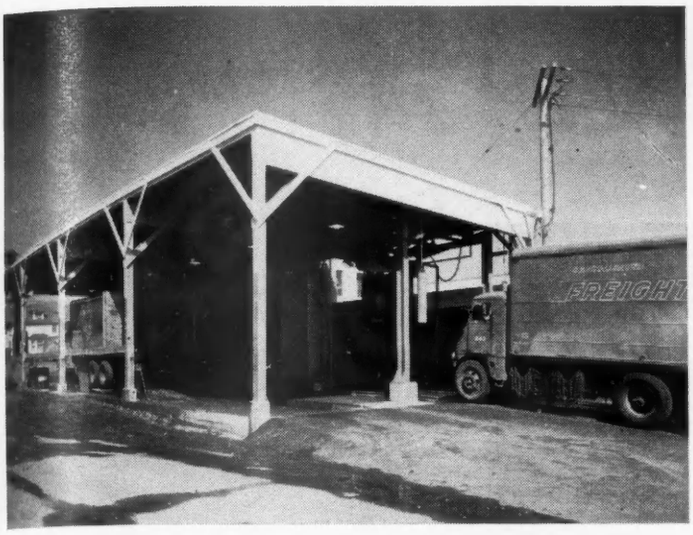
IT IS pretty well established that cleanliness is next to Godliness—in any phase of business. But the most efficient method of achieving that smart appearance for trucks and buses has many operators puzzled. True, clean vehicles look good, bring in more business, contribute to employee and owner pride. But it costs money to keep them presentable—a lot of money.

Progress-minded fleetmen have been asking three questions for years: How often should I wash my equipment? When? and How? Actually they would like to know how to keep their vehicles in the best possible condition appearance-wise, at the lowest possible cost, penny-wise. The answers, of course, depend upon many factors, but expense-wise the type of equipment used for washing procedure is one of the first considerations of the cost-conscious owner, for in this lies the answer to how often he can afford the time required for the job, how much each job costs in terms of equipment and man power, how complete a job he can do in the time and space available.

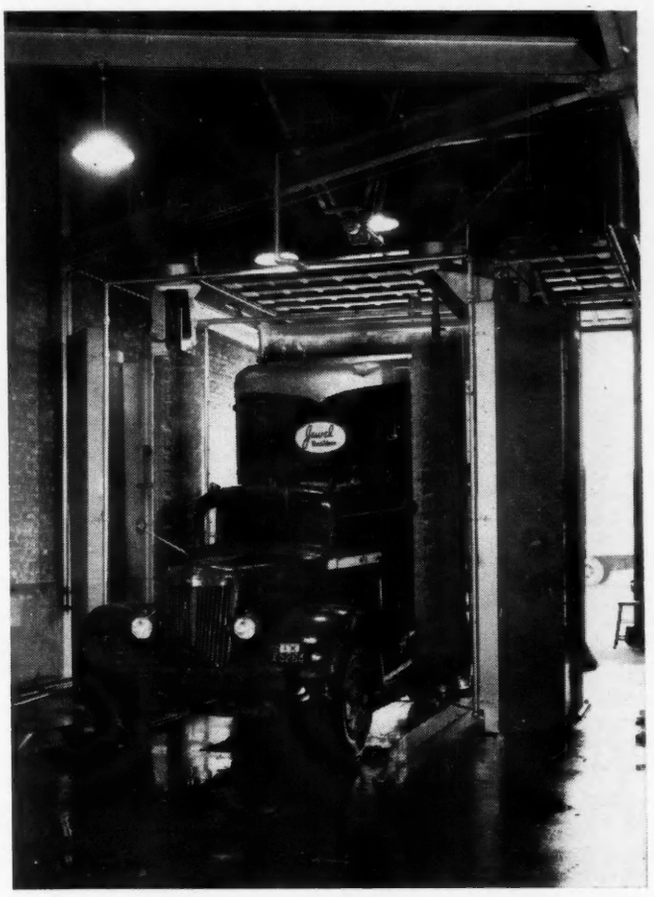
There is a washer designed for every condition and every size fleet. That may be a chamois and sponge, a fountain brush with or without detergent, a mechanical washer of either stationary or portable type, a high pressure spray gun, or a system of nozzles (made up in the shop) to direct a water spray, a foam or detergent and a rinse over the vehicle.

Obviously there are advantages and problems with each type—in terms of time, initial outlay of capital, cost of operation, operating personnel, and space. The chamois and sponge obviously will represent the least cost in terms of equipment, but if the owner will figure out the time required to complete a truck, and the poor work represented in comparison with other systems, he will soon relegate these horse and buggy implements to the store room.

In the next price range would come the fountain brush. The brush with



An outside installation of the Whiting washer provides for fast clean up of vehicles as they pass through. Washing time averages one minute per truck



Vehicle is driven through the Whiting washer here, where it gets a speedy wet down, soap and rinse

Equipment

running water and/or detergent or soap will cost from $5 to $10, will do a satisfactory job under semiskilled hands—but will take in the neighborhood of 20 minutes to wash an average sized trailer. If the fleet is small, if trucks are tied up in the shop anyway so that they can be washed at the convenience of the shop, if the fleet prefers not to spend high outlays of capital the fountain brush will do the job. In addition the brush may be necessary in any operation to supplement the other washers, for not all can reach all surfaces of the vehicle.

Power washers with high pressure hand nozzles are ideal for small size vehicles and passenger cars. They are versatile in that hot or cold water can be applied, detergents may be used, and rinse may be added under extremely high pressures that get under caked dirt and grease better than low pressure systems. Another advantage of this equipment is the fact that it will reach undercarriages and other hard to reach spots with relative ease. Cost of this type equipment may run in the neighborhood of $350, while the washing time for a 35-ft trailer will average approximately 40 minutes.

Mechanical washers represent the highest outlay of money, prices ranging from $2000 up. These may be had in the form of stationary apparatus,

(TURN TO NEXT PAGE, PLEASE)

The new portable mechanical washer made by Ross & White is mounted on a fork lift truck and is carried where it gets a speedy wet down, soap and rinse

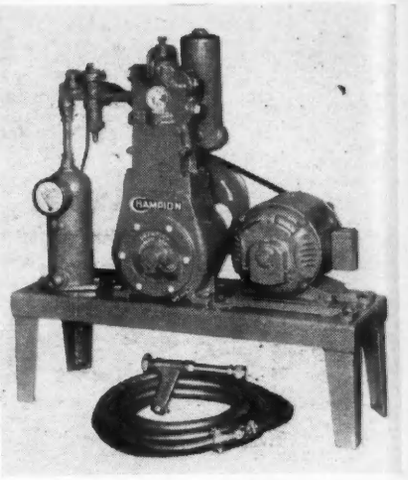
Turco's Car Shampoo is being applied here through a system of pipes and nozzles. Following this application the bus will be brushed to agitate the grime

. . . Wash-Up Equipment

Continued from Page 63

The Wavewash, made by Phillips Pump and Tank Co., can be installed in present washing area and will effectively cover light truck in 10 min

This power washer built by John Bean Co. uses pressure with hot or cold water, or detergents to remove dirt and grime from all parts of truck



The Champion pneumatic power washer with gun nozzle is installed adjacent the wash rack and used to augment the brush or power washer

or in portable units which can be taken to the job. Stationary mechanical washers, while relatively new to the truck field, have been used on railroads for a period of years. They are capable of washing a 35-ft tractor trailer combination in one to two minutes. So the advantage is obvious. However, as owners will agree, a high volume of wash jobs will be required to justify this equipment. For large fleets and large vehicles, where time is at a premium, mechanical washers should be considered. Whether the unit should be portable again will depend upon the needs of the fleet. There are several types to choose from as will be seen.

Many fleets have designed their own stationary washing equipment in the form of overhead and side mounted pipes spraying all sides of the vehicle as it passes through. This arrangement usually consists of three stations, a wet down section, a detergent spray section and a rinse. Either nozzles or a series of graduated holes in the pipes direct the liquid over all sections of the vehicle, with pressure being supplied through auxiliary pumps to the city pressure system. A separate container contains the soaps or detergents which are metered into the system as desired. Operation of the stations can be made automatic or can be controlled through a series of switches, and valves. Since there is no mechanical action supplied with this home-made system, it is usually necessary to use fountain brushes to expedite the cleaning operation.

Costs of this apparatus will vary with the fleet doing the job, while the time required per vehicle will be determined by the condition of the surfaces and the thoroughness of work required. It should be noted that many manufacturers providing mechanical systems will quote a figure on supplying material for this type washer.

Whether overhead conveyer systems are employed or hand-operated portable units are used, homogenizing units should be installed to mix the detergents. They will prevent waste and cut washing time. The Drex-Foam system built by the Detrex Corp. is a compact machine providing acclimatizer, Drex-Foamizer and rinse. As the vehicles pass through the wash rack, banks of sprays are automatically energized at each station. Thus the process can be adapted to any production rate desired.

Mechanical Washers

ONE of the newest types of mechanical washers available to the truck and bus fleet field is the Whiting Model S-75, an adaptation of the original train washer. The Whiting washer is provided with three rotating brushes 18 in. in diameter, one for each side of the truck and one for the roof. The brushes are made of Tampico fibre and are retractable, being mounted on arms which are supported on a steel framework bolted to the concrete foundation. Each brush is rotated by an individual electric motor and is held in proper washing position against the sides of the vehicle by an individual air cylinder with push button control. Motors and solenoid-operated valve may be controlled by push button, dangle switch, or electric eye.

Each brush is composed of 9-in. sections, with split plastic core, so that any 9-in. section can be removed or replaced without disturbing adjacent sections. The brushes can be made to any length to accommodate varying sizes of trucks.

Three water sprays are provided: a wetting spray located in advance of the brushes, a washing spray for each brush to flush away dirt loosened up by the brushing action, and a final rinsing spray of clean water placed beyond the brushes. A water supply of 200 to 250 gallons per minute is required.

Advantages of this machine are obvious: One man can wash a truck in

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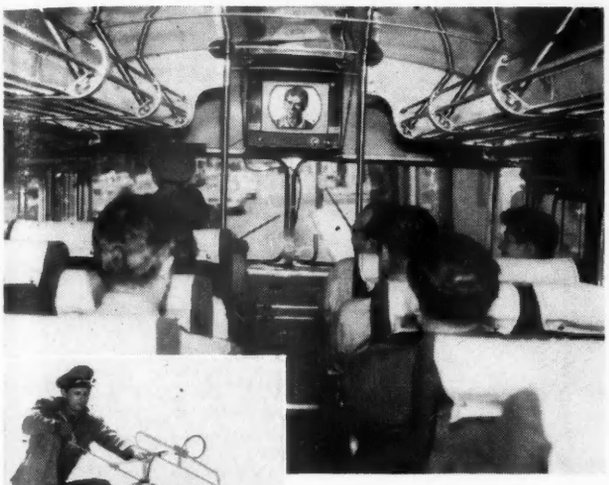
PICKED pix
OF INTEREST TO FLEETS



T V Entertains Bus Riders

A 12½-in. table model television set is installed in one of The Short Line Bus Co.'s units operating between San Francisco and Los Angeles. Mounted on a special bracket in the front, out of the driver's line of vision, programs are picked up over 60 percent of the route. A separate gasoline driven generator supplies power for the set. Inset shows driver Max Temple inspecting aerial which can be rotated from inside for tuning

Sterling Heil Hauls 45 Tons

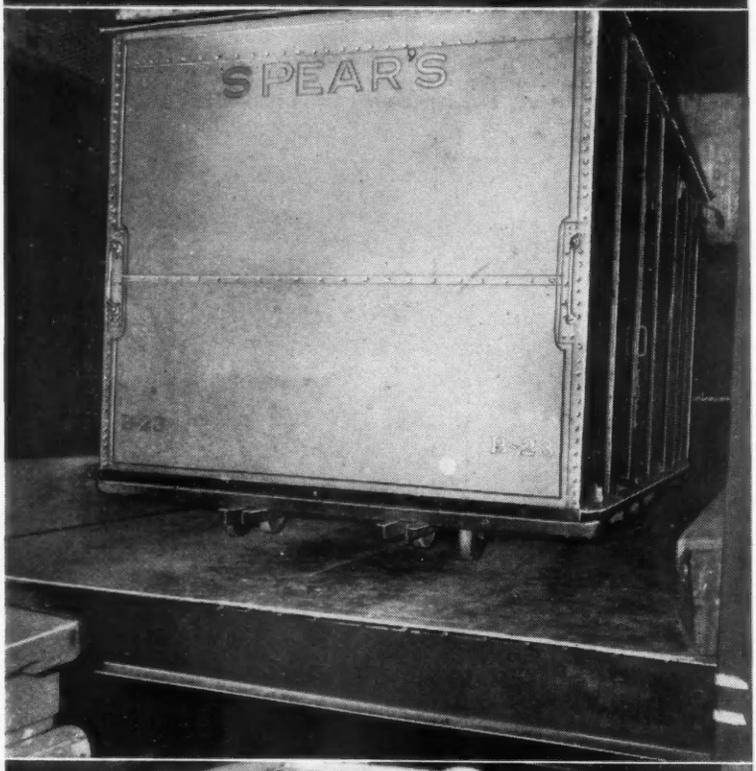
The huge 28-cu-yd dump body made by the Heil Co. is activated by a double-acting, single-link, twin-arm hoist. Weighing 35 tons empty, the unit is capable of raising and dumping its 28 cu-yd body in 20 sec. It is mounted on a six-wheeled, 163-in. wheelbase Sterling chassis, powered by 325-hp diesel engine and chain drive. Speed in overdrive is 32 mph

Can't Blame This On Trucks

This section of highway located near Pittsburgh collapsed before any vehicle had an opportunity to travel on it. Failure is said to be caused by a shifting seam of butter clay located 30 to 50 ft below the surface. It clearly illustrates that many factors contribute to highway deterioration besides traffic

"Miss Beachcomber" Tested by Atlantic City

The Beach Sanitizer, named "Miss Beachcomber," now being tested by the Dept. of Public Works, Atlantic City, N. J., scoops up the top six-inch layer of sand, screens out all broken glass and other debris, and leaves only clean sand in its wake. Built by Sanitized Beaches, Inc., Aurora, Ill., the unit, powered by Waukesha, cleans a 6½-ft wide sand strip at 1½ mph



Roll-Off

UNDER TODAY'S KEEN competitive conditions of retail merchandising, there exists a definite need for an efficient cost-savings delivery system. Like any other of the overhead functions of the overall business operation, it must be as efficient as possible and be keyed operation-wise with other related functions—such as equipment storage, warehousing and sales. Only in such a way can it contribute it's fullest share to the profit-

EDITORS' NOTE: While there is nothing new in the idea of a demountable body, the question of its practicability and economy comes up frequently enough to warrant a review at this time. Commercial Car Journal, therefore, asked the author, a well-known body designer, to make a first-hand study of Spear's highly successful operation. This article contains the author's conclusions.

FIG. 1, upper left. The roll-off chassis. Its principal construction feature is a standard steel channel, with flared ends, mounted on wood sills on top of main chassis rails. Arrow points to quick-action, hook-type tie bar

FIG. 2, center. Roll-off body on elevator. Except for wheels and casters, design is conventional. Corner of chassis can be seen at left. White marks at right are chassis height guides

FIG. 3, left. Here body is on third floor of warehouse being loaded at night for next day

FIG. 4, below. Close-up of the chassis shows roll-off rails and accessibility for maintenance

Body Cuts Delivery Costs

Demountable body eliminates one materials handling routine and driver-helper loading, permits chassis maintenance while body is loaded; and has flexibility of a semi-trailer

By E. M. Westberg, Body Designer

able operation of the entire business.

Some years ago, this need for an efficient and minimum-cost delivery service, and it's relation to the other affected functions of the business, was recognized and efficiently solved by Spear & Co., a large home furnishings retailer located in the heart of New York City. The result is a time-proved, smooth-running system of merchandise handling from pick-up of factory shipments, through show rooms and warehouse, to delivery to the buyer's home, with a roll-off body playing a key role.

This efficient cycle of operations was fully integrated into the business. Delivery of merchandise was not considered as an individual function but, rather, as one very closely related to other functions; such as sales, warehousing, preparation for delivery and loading. The system which Spear's developed and proved over the years could, with variations, be adapted to many other material handling and delivery operations with like or similar conditions.

The Basic Problem

THE basic problem facing Spear & Co. was the delivery from warehouse inventories, within an approximate radius of 100 miles, of furniture and related merchandise sold from floor samples in five stores located throughout Greater New York. This was complicated somewhat by a number of other serious and troublesome factors—such as equipment storage space, low ceiling, need for efficient use of all available warehouse space, loading ramps, variations in load sizes and length of delivery routes, need for planned scientific loading to assure orderly stops and unloading along the route, plus space for preparing of merchandise.

The problem of space was the most important. In solving it with the development of the very simple roll-off type of body, all of the other complicating factors were effectively overcome and many unforeseen benefits were gained, as will be explained later. From the standpoint of space, the roll-off body permitted the stor-

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FIG. 5. This is the front end of the chassis rails showing the stops that position the body

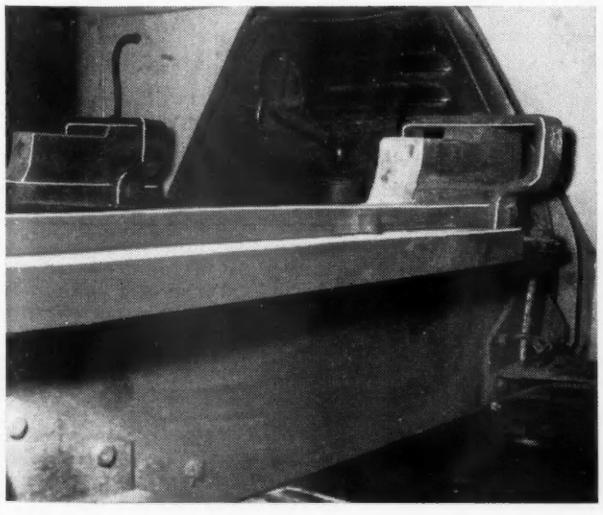
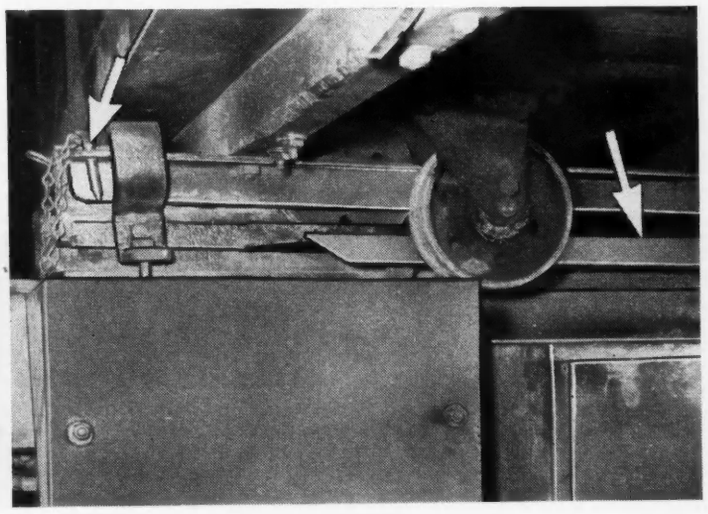
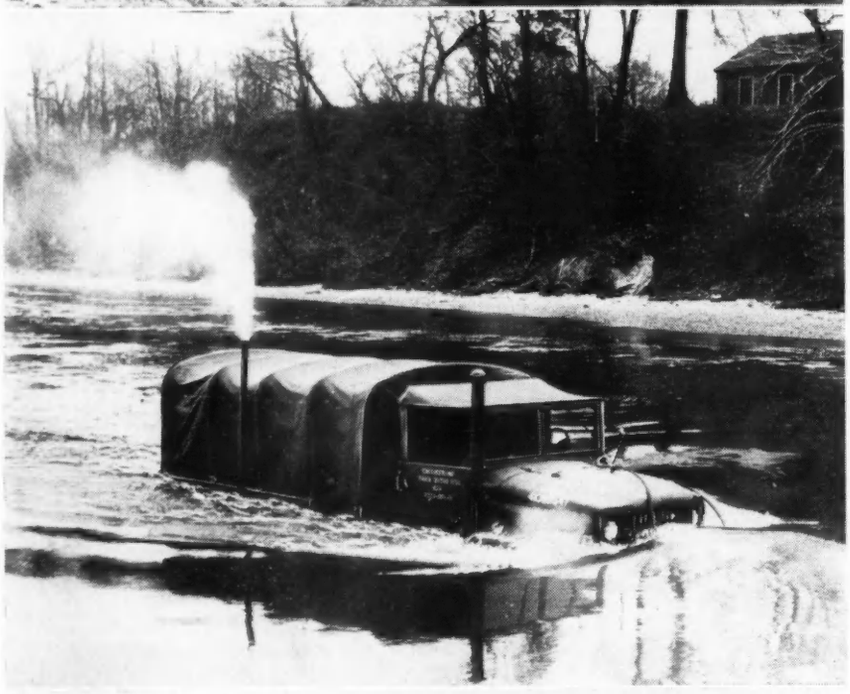


FIG. 6. Arrow at left shows pin-type safety catch and, right, castor anti-swivelling rail



REO'S



DETAILS and specifications on the long-awaited Reo military truck have just been released. Known as Model M-34, 2½-ton, 6 x 6, it has a wheelbase of 154 in., will carry a payload of 10,000 lb on the highway, 5000 lb cross country. Designed to meet the extremes of military service, this vehicle is capable of a maximum speed of 60 mph, with rated load on the highway; can negotiate a maximum grade of 60 per cent; will maintain a speed of 30 mph on a constant grade of 3.8 per cent; and has a cruising range of 350 miles at 35 mph.

This new vehicle is capable of normal operation in air temperatures ranging from minus 65F to 125F. It can operate in water to a depth of 7 ft.

To meet the latter requirement, the Reo Gold Comet engine is completely water-proofed and, under tests, has shown ability to run indefinitely while completely immersed; and stop and start while immersed. In addition, various parts of the vehicle that require breathing are vented to a manifold system to be described later. In preparation for fording the vehicle carries an underwater kit consisting of standpipes or breathers for the induction system and tailpipe, termed tentatively as the "schnorkel" and "snorter."

In general, the M-34 incorporates features of simplicity of maintenance as well as parts interchangeability to

TOP. Powered by the Gold Comet engine the M-34 incorporates simplicity of maintenance as well as parts interchangeability

CENTER. Underwater kit consists of standpipes for the induction system and tailpipe, waterproofed electrical system, starter, generator, regulator and spark plugs. LEFT. Control valve on instrument panel prepares vehicle for underwater movement

ARMY M-34

—Features Interchangeable Parts—

Newly developed 2½-ton, 6 x 6 "Eager Beaver" carries a 10,000-lb payload at a speed of 60 mph. Fords water to a depth of 7 ft

AXLE INTERCHANGEABILITY

1—Rear axles are interchangeable as complete assemblies.

2—Rear axle housings are identical.

3—Final drive assemblies, interchangeable for all axles, including front.

4.—Differential case halves identical

5—Axle shafts are identical and interchangeable from side to side.

6—Hub and bearing cup assembly identical for all axles.

7—Inner and outer bearing caps identical for all axles.

8—*On the bogies*—

(*a*)—Torque rods are interchangeable and reversible.

(*b*)—Upper and Lower torque rod brackets are identical and removable.

(*c*)—Spring seat brackets are identical and removable.

(*d*)—Inner and outer spring seat bearings are identical on both sides and interchangeable with outer wheel bearing.

(*e*)—Spring seat bearing adjusting nuts are identical and interchangeable with wheel bearing adjusting nuts.

9—Brakes—as a complete assembly, identical and interchangeable side to side.

10—Brake wheel cylinders are identical and interchangeable side to side.

11—Brake drums are identical and interchangeable from side to side. Moreover, they are demountable without disturbing wheel bearing adjustment.

12—Pinion oil seals are identical in all axles and on transfer case shafts.

13—Wheel bearing seals are interchangeable for axles and bogie spring seats as well.

14—Inner and outer wheel bearing cones are identical for all axles.

15—Wheel bearing adjusting nuts are identical.

16—Universal joint flanges are interchangeable on all axles.

a degree unattainable heretofore. Engine specifications show an increase in compression ratio to 6.73 to 1 for operation on 80-octane gasoline. The engine is fitted with a 24-volt, waterproof and radio-shielded electrical system including the following equipment: Delco-Remy 24-v, 25-amp sealed generator; D-E 24-v sealed starting motor; a special waterproofed D-R unit combining distributor and coil; a sealed D-R voltage-current regulator mounted on the dash; and a waterproofed D-R 23-plate, 100-amp hr. capacity battery. Resistor type spark plugs with 10,000-ohm resistors are used in conjunction with weather-proofed wiring hardness, including radio shielding.

The oil filter is a Fram Senior of military type while the air cleaner is a Donaldson Type 9 E. The Holley downdraft type carburetor, Holley governor, and AC fuel pump complete the itemization of accessories.

Special Front Drive

ONE of the most important elements of this vehicle is a unique type of transfer case, the Model T-136, supplied by Timken and incorporating some performance features not available heretofore in a vehicle of this size and character. It is of two-speed type with direct forward ratios of 1 to 1 and 1.98 to 1, with constant mesh and gearing and synchronized shift for both speeds.

The unusual feature of this unit is the provision of an automatic means of engaging the front axle drive. This is accomplished through a double overrunning clutch on the front output shaft, which in combination with a reduction gear set, is arranged to drive the front axle output shaft at a slower speed than that of the rear output shaft regardless of the direction of the vehicle. Consequently, positive drive to the front axle is not effective unless the rear wheels slip or until sufficient wind-up takes place in the rest of the running gear to absorb the difference in ratio of output shafts.

The transfer case also incorporates a power take-off of full power type which can be operated while either on the full run or at standstill. It also

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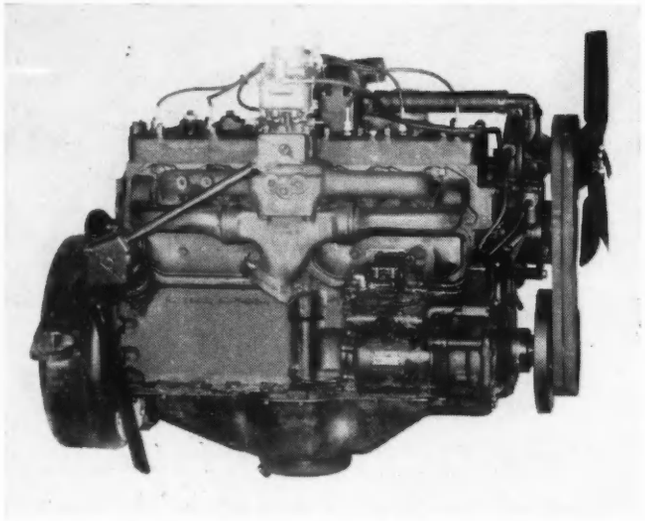
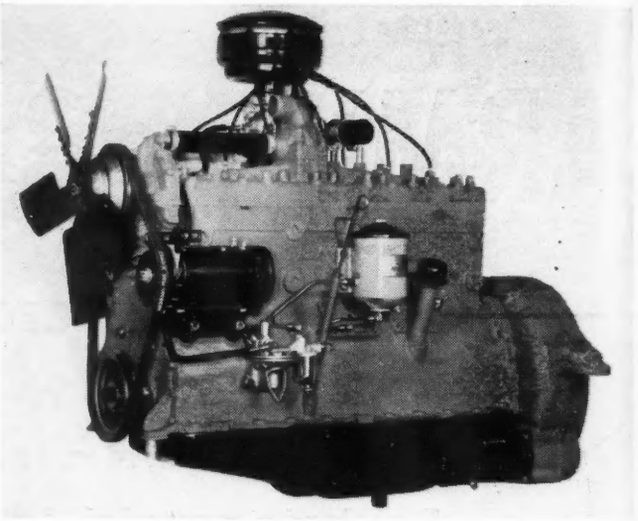


The A-40 337 cu in. engine powers the 24,000 to 40,000-lb four or six wheel jobs. Improved cooling, manifolding and valve construction characterize this engine

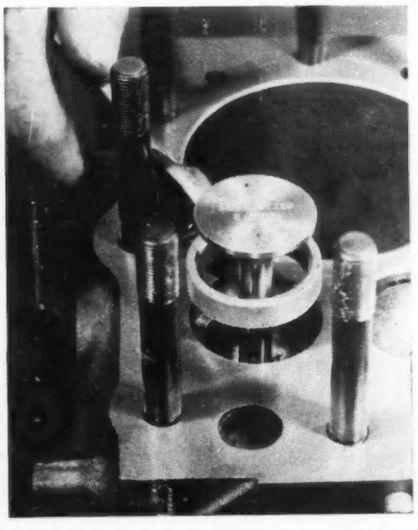


The A-30 331 cu in. engine designed for the 21,000 lb jobs. This engine is similar to the A-20 except for larger bore. Rugged bearings, crankshaft, blocks and timing gears are featured

Three New Mack Engines

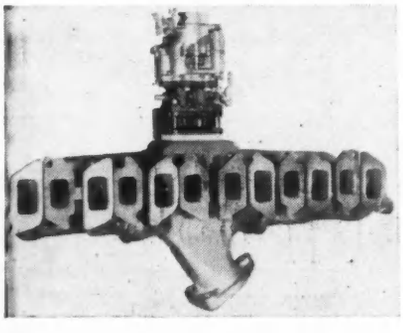
Power the A Line

Rugged construction, 6.7-1 compression ratio, improved cooling and manifolding are featured



Exhaust valve seat inserts are of Niferrite alloy. Valve lifters incorporate a rotating mechanism for longer life

Increased life of exhaust manifolds is secured through the use of aluminum iron with three-piece slip joints



THREE new Mack-built engines of 290, 330 and 337 cu in, capacity have been introduced by Mack Trucks, Inc., to power the series of A models in 17,000 to 45,000-lb gross vehicle weights. Called the Magnadyne engines, these power plants are designed for high compression ratio of 6.7 to 1 for high speed hauling needs, with maximum efficiency.

The A-20 engine, powering the 17,000 gvw vehicle, develops 107 hp at 2800 rpm. With a 3¾-in. bore and 4⅜-in. stroke the engine displaces 290 cu in., develops 232 lb ft torque at 1400 rpm.

The A-30 engine, designed for the 21,000-lb truck, develops 122 hp at the same speed, while the A-40, built for the 40,000-lb vehicles is rated at 140 hp at a governed speed of 2800.

Special attention has been devoted to cooling and rapid dissipation of heat concentrations in all engines. A system of directed water flow is used, for instance, whereby coolest water is brought first to the hottest parts and jet-directed individually to each of the exhaust seat ports. The new engines are characterized by rugged construction of blocks, pistons, pins, rods and crankshafts designed to provide smooth power.

All engines are equipped with improved combustion and manifold systems and exhaust valve seat inserts. Increased life of exhaust manifolds through prevention of burning and warping is attained through the use

(TURN TO PAGE 126, PLEASE)

DRIVER COOPERATION
Can Cut Bus Maintenance Costs

By J. B. Blaiklock
Superintendent of Equipment, Capital Transit Co.
Washington, D. C.

Capital Transit's drastic retrenchment cut costs without sacrificing service

Equipment superintendent cites cases where maintenance costs rise unnecessarily because of accidents and improper vehicle operation

THE CHANGES I have enumerated (See "How Capital Transit Co. Slashed Maintenance Costs, CCJ, July, 1950, Page 58), are only a few we have made—to give you an idea of the steps we have taken. Other changes will be made as fast as it is evident that economies can be gained by them.

Now, I would like to suggest a few things the transportation department can do to encourage riding, reduce delays, and, above all, reduce maintenance costs.

The operations men responsible for the training and supervision of operators can control, to a large extent, maintenance expense other than that caused by normal wear. However, to do this effectively they must have the benefit of the experience and information available from maintenance men—specific information, not generalities.

Expense of this type can be separated into the following categories, for the sake of discussion:

1. Damage due to accidents.
2. Damage caused by improper operation, either through carelessness or ignorance and lack of skill.
3. Excessive wear and waste caused by improper operating techniques.

It is my firm belief that although we all cuss the operators at times, in the main, they are reasonable men. If they were shown what could be done along the lines of economy, and it was explained "how and why," I am sure that at least 90 per cent of them would react favorably and help with enthusiasm.

One real saving in dollars and cents can be obtained from a more active safety program. We have improved our position on this phase of our activities, and there still is plenty of room for improvement. In 1945, we had a total of 136 lost-time accidents as against a total of 31 in 1949.

I will not attempt to quote the cost of these, as comparison is not fair—due to the increased compensation benefits now allowed, and the fact that one severe accident might cost as much as 100 smaller ones.

Operation Damage Costly

DAMAGE caused by improper operation, either through carelessness or ignorance and lack of skill, is closely related to excessive wear caused by improper operating techniques. It is principally a matter of degree. Because the former results in a grater degree of maintenance cost, I will review first some of the most common examples of costly

(TURN TO PAGE 136, PLEASE)

free PUBLICATIONS

A selected list of the latest literature—catalogs, pamphlets, charts—chosen to help fleetmen improve operation and maintenance.

FOR YOUR CONVENIENCE USE THIS POSTCARD

L35. Leaf Spring Record

A record system for leaf spring maintenance is available to owners of trucks and buses. This newly developed record permits complete maintenance data to be kept on each vehicle, providing for the position, date of installation, mileage at installation, position when taken off, date and mileage when removed, and a column for remarks. Thus a glance at the record will show the operator immediately if he is having excessive breakage and where it is occurring so that intelligent remedial measures can be taken.

For free copies of this system and cards for your vehicles, write L35 on the accompanying postcard.

L36. Paint Stripping Book

An interesting account of materials and procedures designed to simplify the removal of oil base and synthetic paints, enamels and similar finishes from metal surfaces is provided in an illustrated, 14-page booklet.

The booklet discusses specific paint-stripping materials and describes four simplified methods of removing paint from surfaces. These are: (1) the hot flow-on method, where surfaces are flooded with hot solutions of stripping compound to remove paint from large areas or parts too big for immersion stripping; (2) the cold-spray method, where pressurized cold solutions are employed to strip paint from large parts when equipment or facilities are limited; (3) the steam gun method, where paint is blasted off surfaces by the rapid, combined action of steam and stripping compound; and (4) the tank immersion method, for effective stripping of rejected parts in mass production operations to prepare them for resurfacing.

Also discussed briefly in the booklet are specialized materials for surface preparation of parts before repainting to promote improved paint adhesion. and materials for efficient anti-rust protection of stripped rejects awaiting repainting. Free copies may be obtained by writing L36 on the postcard.

L37. Size and Weight Book

"Watch Your Weight," is a new edition of a one-page guide showing height, length, and maximum gross weights permissible in each state—just brought up to date for trucks and truck trailers.

This handy chart is yours for the asking. Just write L37 on the postcard and put it to work for you.

L38. Propane Data

A new booklet descriptive of the use of propane fuel in motor buses appropriately titled, "The Propane Story," traces the history of propane from its discovery in 1910 to its present widespread transportation use. Full data is presented relative to comparative costs between propane, gasoline and diesel fuel. According to the booklet the use of propane can effect fuel savings of $1000 annually over gasoline and $650 over diesel fuel. These figures are based on an annual operation of 50,000 miles per vehicle. Propane is also reputed to cut maintenance expense and to increase time between engine overhauls by 50 per cent.

Other booklet sections deal with propane's elimination of smoke and obnoxious odors, its smooth, quiet operation and its operating safety. Emphasis is placed upon the fuel's approval by insurance underwriters. The propane fuel system is illustrated in detail.

Write L38 on the postcard for a free copy.

L39. Rope Chart

A new rope reference chart gives specifications on manila, nylon and sisal ropes.

Measuring 17 in. by 22 in. this wall chart is attractively designed. Such data as rope diameter, circumference, approximate net weight of 100 ft, approximate gross weight full coils, breaking strength and working strength is included for sizes ranging from 3/16 in. to 3¾ in. in diameter.

Write L39 on the accompanying postcard for a copy of the chart.

L40. Reconditioning Guide

A giant wall chart detailing a step-by-step procedure for appearance reconditioning of used cars and trucks has been prepared for posting in body shops and garages as a guide for employees doing reconditioning work.

The new chart lists all individual steps necessary for a thorough appearance reconditioning job and gives exact instructions about the type of work to be done, but also indicates the proper sequence for those steps in order to insure maximum efficiency and economy in reconditioning work. A copy may be had for the writing of L40 on the postcard.

FOR YOUR CONVENIENCE USE THIS POSTCARD

New PRODUCTS

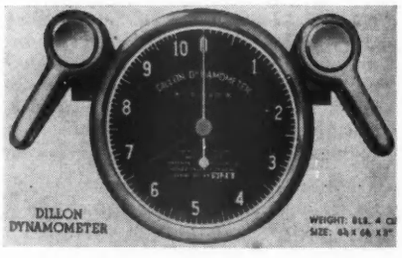
Illustrating and reviewing newest developments in parts, accessories, shop equipment and tools. For more information use the attached postcard.

P241. Nozzle Cleaning Kit

A nozzle cleaning kit added to a line of diesel testing and service equipment contains cleaning wires, pin vises, wire brush, bristle brushes and lapping compounds, all tools required to clean out clogged diesel nozzles, protect injector ports and keep them working efficiently. Bacharach Industrial Instrument Co., Pittsburgh, Pa.

P242. Portable Scale

A scale, known as the Dillon Dynamometer is used for weighing loads. It operates through deflection of a special alloy steel beam. The load is transmitted



to the mechanism by means of a clevis on each of the beams' end. Unit is unaffected by temperature and can withstand a 25 per cent overload. The case is of heavy metal, dial is 22 gage brass protected by a ¼-in. shatter-proof safety glass. Available with 5- or 10-in. dials, capacities range from 0 to 250 lb up to 0 to 50,000 lb. W. C. Dillon & Co., Inc., Chicago, Ill.

P243. AC Welder

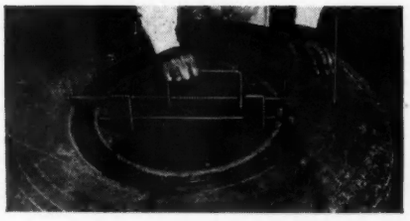
The new AC "Fleet Welder" has a N.E.M.A. rating of 200 amps at 30 volts, 50 per cent duty cycle and current range of 30 to 250 amps. Arc stability results from independent reactance control, low electrical losses and permits welding of thin sheets. Dimensions are 28⅛ in. high, 17⅛ in. wide, and 18¾ in. deep. The Lincoln Electric Co., Cleveland, Ohio.

P244. Ace Pallet

The pallet roller permits the movement of palletized loads to a place where the fork truck can take over. Available in four sizes units consist of a steel frame incorporating ball bearing rollers. Frank L. Robinson Co., Oakland, Calif.

P245. Tire Safety Tool

This tire safety tool fits into the wheel rim and prevents the lock ring from jumping out during tire inflation.

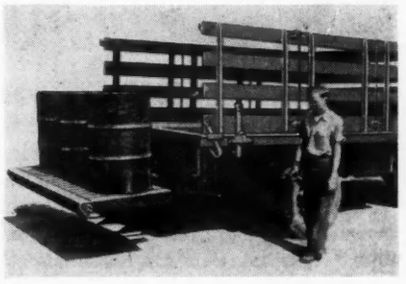


The tools are made of 1- by ½-in. machine steel using all-welded construction, and are cadmium plated. Type A tools are available for each common truck rim wheel size. For Budd and Motor wheels a Type B tool, not shown, is employed. The Titus Tool Co., Cincinnati, Ohio.

P246. Hydraulic End Gate

A combination hydraulic lift end tail gate, known as the Cobey Hydra-Powers End Gate, is operated from the power take-off.

Features of the unit are: use of only one hydraulic cylinder for all operations, rugged box-type gate of wood and steel construction, a load capacity of 3000 lb, elimination of side obstruction permits loading from sides,



safety-designed gate cannot be closed or opened accidentally and operating controls are located at the rear of truck platform. Controls for operations from truck cab can be supplied. The Perfection Steel Body Co., Galion, Ohio.

P247. Valve Refacer

A new valve facing machine Model "CV" has a wet grinding feature built in with coolant sump integral with the machine base. The coolant pump is a centrifugal type designed to prevent coolant from ever reaching pump bearings. The machine has a chucking capacity of ¼-in. to ⅝-in. and will grind all standard valve angles including 15

(TURN TO PAGE 76, PLEASE)

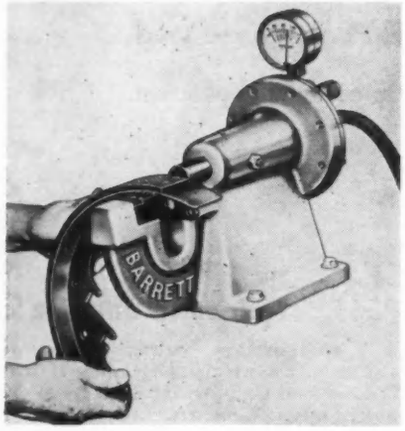
New Product Descriptions

Continued from Page 75

deg without special attachments. An automatic clutch feature starts and stops coolant flow and chuck rotation. Kwik-Way, Cedar Rapids Engineering Co., Cedar Rapids, Ia.

P248. Brake Bond Tester

The Bond-Tester incorporates an air-operated ram, instantly adjusted to manufacturer's specified pressure, that



tests and marks lining to show whether bond is safe. Operated on standard shop air line, it is equipped with foot controlled air valve. The unit handles brake shoes from 1½-in. to 3-in. width, of any diameter. Barrett Equipment Co., St. Louis, Mo.

P249. Micrometer

The new easy reading micrometer caliper, the Read-Rite, has the same "feel" as a conventional micrometer and works in the usual way. However, measurements are more easily determined because numbers automatically appear in the window on the thimble and the reading can be determined at a glance. The Central Tool Co., Cranston, R. I.

P250. Tandem Trailer

Heavy-duty, tandem axle, low-bed trailer, with rated capacity of 40-ton, is within the 8-ft width limit. Available with flat or drop type platform, it is fitted with eight 10:00 x 15 20-ply tires, which are rated at 50,960 lb capacity. Total trailer weight is 11,200 lb.

Eqiupped with "walking beams" supporting rear axles, the trailer is fitted with extra large (12¼ x 6), constant-rise S cam brakes, actuated by either air or vacuum. La Crosse Trailer Corp., La Crosse, Wis.

P251. Performance Meter

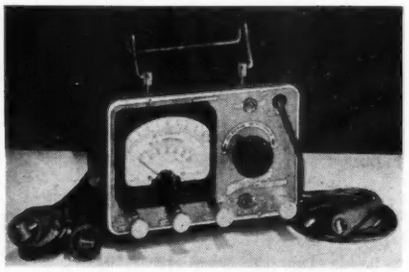
A moving-coil voltmeter for permanent installation on any motor vehicle is provided for a continuous check on the vehicle's storage battery generator and regulator, while the vehicle is in operation. It is equipped with a direct reading scale in colors. The meter is mounted in a bracket for mounting on the verticle firewall of the cab. Burton-Rogers Co., Cambridge, Mass.

P252. Muffler

A new line of heavy-duty mufflers, said to reduce exhaust noise to a low level without objectionable back pressure, are made of aluminized sheet throughout to inhibit corrosion and assure longer muffler life. Two types are available, a vertical cab-mount muffler and an oval type for under-chassis installation. Both are designed for gasoline and diesel engines in the 150 to 300 hp range. Donaldson Co., Inc., St. Paul, Minn.

P253. Electric Tester

A new, portable instrument tests automobile starting circuit, charging circuit, ignition circuit and lighting circuits. It tests automobile voltage regulators to insure proper flow of electrical



energy to storage battery. Current relay is checked by connecting in series to accurately read current regulating point. Called the Model AVR-2, the unit measures 5½ x 8¼ x 3¼-in. and weighs 3½ lb. The Hickok Electrical Instrument Co., Cleveland, Ohio.

P254. Tire Chain

An improved tire chain design features use of straight shank connecting links between cross chains and side chains. These differ from conventional "pinch type" connecting links in that they hold cross chains at a constant 90 deg angle in relation to side chain links. The Cleveland Chain & Mfg Co., Cleveland, Ohio.

P255. Fuel Filter

A new gasoline and diesel fuel line filter provides a positive seal against leaks by utilizing a series of V-shaped filter discs covered with a filter media of non-woven rayon cloth. It separates water from fuel in addition to micronic dirt and sediment particles. The filter is said to provide an extremely large effective filtering surface within a very small space. Sparkler Mfg. Co., Mundelein, Ill.

P256. Portable Magnaflux

This new, portable, general purpose Magnaflux unit, the KH-05 for maintenance inspection, requires only 110 volt AC supply line to give AC or DC magnetization using low voltage, high amperage magnetizing currents. 500 magnetizing amps are available.

The unit has an integral welded steel frame, supported on ball bearing semi-pneumatic rubber tired wheels. The KH-05 contains powder, materials and 30-ft of magnetizing cable. Three Eitherend connector outlets on the unit allow connection to two for AC, or another combination of two for DC magnetizing current.

A Magnaglo kit is available as an accessory. Magnaflux Corp., Chicago, Ill.

P257. Cylinder Borer

Model "FR" has a capacity of 2.2-in. to 4 7/16 in. with a stroke of 12½-in. It features screw-feed with automatic retraction, two speeds and two feeds, instantly changeable, 3-finger centering and positive non-distorting anchoring and clamping. Chip removal is from the top through the use of the Kwik-Way Vortex exhaustion device. Cedar Rapids Engineering Co., Cedar Rapids, Ia.

P258. Steam Cleaner

A portable steam cleaner produces 150 gallons an hour at regulated pres-

(TURN TO PAGE 188, PLEASE)

½-ton 6½-foot pick-up—¾-ton and 1-ton 8-foot pick-ups are also available

First trucks with thrifty automatic overdrive!

AGAIN Studebaker has been first to score with a real advance in truck engineering!

Studebaker's thrift-assuring automatic overdrive is available at extra cost in the half ton and three-quarter ton Studebaker trucks.

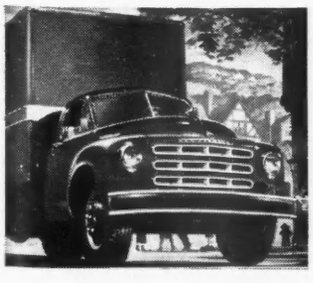
This Studebaker automatic overdrive transmission starts paying its way right away in extra mileage per gallon—and, what's more, it lengthens engine life. Engine revolutions are reduced about one-third—without affecting road speed!

Automatic overdrive or not, you save substantially on all your hauling costs with any of the rugged, reliable new Studebaker trucks.

A Studebaker Econ-o-miser or Power-Plus engine, exactly right in torque and horsepower, comes through with superb, low-cost performance for you mile after mile. Get the convincing proof. Stop in and see a nearby Studebaker dealer now.

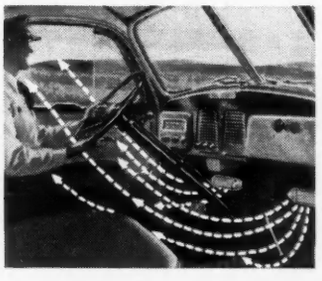
STUDEBAKER TRUCKS

Noted for low-cost operation



Hefty loads or small, there's a Studebaker truck just right for hundreds of different hauling requirements. Husky, handsome, powerful Studebaker trucks in ½ ton, ¾ ton, 1 ton, 1½ ton and 2 ton models.

Low cab floor—cab steps fully enclosed! Cab doors open wide—have automatic "hold open" stops—close securely on tight-gripping rotary latches. Cab door windows have built-in ventilating wings.



Two foot-regulated floor ventilators let fresh air stream in and circulate freely throughout the cab. Wide cab seat has a restful Adjusto-Air cushion. Big windshield and windows assure exceptional visibility.

Father-and-son teams and other trustworthy craftsmen build wear-resisting ruggedness into all Studebaker trucks. The result is real protection against costly repairs.

© Studebaker, South Bend 27, Indiana, U.S.A.

New Truck Registrations by Makes by States*

STATE		Auto-car	Brock-way	Chev-rolet	Dia-mond T	Divco	Dodge	Fed-eral	Ford	FWD	GMC	Inter-na-tional	Ken-worth	Mack	Pon-tiac	Reo	Ster-ling	Stude-baker	White	Willys	All Others	Total
Alabama	May			775	1	4	55	1	707		193	140		17	1	1		81	33	32		2,041
	5 Mos.	2		3461	8	13	634	4	3069		849	602		76	10	11		462	99	180	5	9,485
Arizona	May			221		1	27		183		63	31		1		1		34	3	24	2	591
	5 Mos.			864	3	5	180		754		246	179	6	7	1	4		130	11	83	9	2,482
Arkansas	May			539	1	2	51		426		147	80		1	1			51		16		1,315
	5 Mos.			3730	9	2	782	1	2838		897	635		18	15	8		575		198	1	9,709
California	May	10		1968	30	35	186	2	1422		542	289	28	27	5	9	14	277	34	98	32	5,008
	5 Mos.	40		9474	111	182	1398	14	6724	5	2130	1515	59	92	27	42	42	1201	119	393	92	23,670
Colorado	May			533	1	8	35	1	334		93	98		1		6		50	1	33		1,194
	5 Mos.			2336	18	21	343	4	1443	1	416	456	4	11		12		296	16	175	17	5,569
Connecticut	May	5	7	262	7	17	35	7	226		69	67		22	3	1	1	34	11	23	4	801
	5 Mos.	20	27	1013	37	44	220	26	966	2	263	283		82	12	9	9	128	53	74	15	3,283
Delaware	May	1	1	88	1		10		65		22	32		2	1	1		14	3	4	2	247
	5 Mos.	4	6	439	6	4	71		408		85	118		4	5	3		49	16	14	7	1,239
District of Col.	May			106	2	14	7		73		29	30		12	2			2	1	11		289
	5 Mos.	7	1	419	12	32	80	5	315		105	106		19	6	8		14	6	21	2	1,158
Florida	May			845	7	3	137		743		148	144		22	5	5		126	16	95	5	2,301
	5 Mos.	2	1	3034	52	29	807	8	2833		539	610		142	13	35		622	66	309	17	9,119
Georgia	May			1334	4	1	179	1	1237		287	231		15	1	13		170	23	43	1	3,548
	5 Mos.	1		4761	31	16	1257	4	4765	1	1096	1172		99	11	54		813	132	250	10	14,473
Idaho	May			308	5		24	2	199		93	68	8	2	1	5		35	2	46		798
	5 Mos.			981	18		175	5	685	2	304	300	28	11	2	11		171	13	129	14	2,849
Illinois	May	5	1	1292	51	22	145	1	1001		275	418		16	4	4		129	34	55	4	3,457
	5 Mos.	36	3	6497	191	71	1603	11	5085	5	1331	2359		110	34	53	2	770	232	228	28	18,649
Indiana	May	2		851	10	6	76	1	647		167	251		6		5		144	23	37	9	2,235
	5 Mos.	4	2	3482	38	21	694	7	3237	2	689	1280		38	17	32		641	135	144	29	10,492
Iowa	May			1000	10	3	98		741		115	299		8	5	4		85	13	26		2,407
	5 Mos.	1		4419	57	26	721	1	3165		562	1338		36	13	23		431	54	100	7	11,014
Kansas	May			718	6	5	50		515		149	246			5	2		84	11	30	2	1,823
	5 Mos.			3002	26	13	421	1	2147		630	900		1	17	23		289	31	95	4	7,600
Kentucky	May			1052	12	4	81	3	717		310	220		4	4	5		79	7	98		2,596
	5 Mos.	1		3919	45	23	579	9	2864		1045	853		16	17	15		386	47	291	5	10,115
Louisiana	May			711	5	1	62		682		192	118		1	4	1		110	9	26	2	1,924
	5 Mos.	1		2784	25	4	583	3	2711	1	841	573		13	12	8		506	31	139	13	8,248
Maine	May	1	2	212		1	19	2	133		64	74		3	2			26	3	15		557
	5 Mos.	5	9	1207	3	4	262	2	709		379	390		43	12	7		168	17	99	4	3,320
Maryland	May	2	7	446	2	9	52	3	332	1	84	83		23		9		35	9	10	1	1,108
	5 Mos.	7	39	1775	24	29	429	28	1366	1	318	384		85	7	26		148	79	53	10	4,808
Massachusetts	May	18	9	514	12	36	81	6	453		123	193		41	3	7	12	79	53	26	1	1,667
	5 Mos.	84	49	2120	67	73	653	12	1739		463	623		155	34	34	29	312	138	90	7	6,682
Michigan	May	1		1400	13	16	162	41	1310		260	241		11	1	24		78	20	36	2	3,616
	5 Mos.	11	1	6384	54	94	967	64	5793	1	1086	1080		79	7	94		433	111	114	17	16,390
Minnesota	May			803	7	1	61	2	686	1	130	357	1	4	1	2		141	9	23	2	2,231
	5 Mos.	1		3622	42	23	648	11	2913	10	595	1277	6	25	16	16		693	51	93	28	10,070
Mississippi	May			693	1		66		500		195	128		1	1	1		81	3	32	1	1,703
	5 Mos.			2943	8		534	4	2268		897	536		16	13	9		424	26	116	7	7,801
Missouri	May			1199	5	3	146		709		257	197		3	2	6		110	21	34	1	2,693
	5 Mos.	4		5051	27	43	943	2	3285	1	1082	1023	3	68	9	32		541	114	135	29	12,392
Montana	May			270	1		40	3	191		44	105	7	1	3	3		28	3	50	1	750
	5 Mos.			1017	16		234	5	655	1	201	385	12	4	4	13		160	7	231	1	2,948
Nebraska	May			550	17	4	36		420		128	170	4	1		2		44	7	33	3	1,418
	5 Mos.			2369	73	6	336	1	1907	7	440	736	4	8	5	15		288	31	162	12	6,400
Nevada	May			70			3		45		18	12						7		11		166
	5 Mos.			234	2		26		159		83	43			1			32		30	1	611
New Hampshire	May	5	4	211	4	1	111	1	170		49	84		24	1	9		29	3	21		727
	5 Mos.	9	7	536	9	5	238	3	423		161	205		49	4	12		86	10	45		1,802
New Jersey	May	11	24	898	15	22	108	6	630	1	222	216		67	8	6	1	76	54	51	1	2,415
	5 Mos.	52	101	3416	123	107	797	40	2913	6	927	924		249	75	30	7	327	180	200	16	10,490
New Mexico	May			324			31		190	1	96	37		1				46		15	2	743
	5 Mos.	1		1343	1		219		656	2	375	180	4	10		1		224	11	85	13	3,125
New York	May	22	46	1711	58	32	244	15	1174	5	411	519		126	8	41	3	171	84	86	29	4,785
	5 Mos.	289	316	7664	414	161	2545	70	5161	32	2095	2737		827	64	183	27	873	486	527	152	24,623
North Carolina	May	9	1	1034	4	8	99	3	891		154	179		18	1	1		99	23	36	20	2,580
	5 Mos.	31	4	3880	18	29	719	11	3518		661	675		240	10	10	2	501	101	118	50	10,578
North Dakota	May			261	1	1	29		170		36	116		1	1			38		24	3	681
	5 Mos.			708	5	1	156	2	543		123	357		5	2	1		117		85	6	2,111
Ohio	May	7		1674	33	21	150	4	1247	1	384	552		54	12	12		162	111	83	4	4,491
	5 Mos.	40	5	6876	149	135	1267	37	5919	4	1433	2222		256	81	101		693	492	243	11	19,964
Oklahoma	May			827		4	96		581	3	193	147			2	3		98	27	32	3	2,016
	5 Mos.	1		3488	6	27	662		2601	7	857	785		27	10	28		400	81	139	8	9,127
Oregon	May	2		421	12	1	74		391		148	145	2	14			2	46	9	55		1,322
	5 Mos.	7		1814	44	11	366	2	1487		503	555	17	40		4	2	209	26	221	21	5,329
Pennsylvania	May	19	37	1638	35	16	175	8	1403		419	477		66	19	21	5	147	120	78	3	4,686
	5 Mos.	70	214	6691	154	52	1756	42	5822		1497	2148		366	79	133	15	693	392	278	37	20,439
Rhode Island	May	3		97		6	33		166		15	41		14	2	2	1	14	5	11		410
	5 Mos.	18	4	394	10	17	162	1	491		82	165		46	8	9	3	57	21	26	3	1,517
South Carolina	May			479	1	2	36		415	1	117	67		22		1		41	11	16	2	1,211
	5 Mos.	3		1871	4	9	372	1	1611	2	418	282		56	10	4		242	45	49	7	4,986
South Dakota	May			202	11		25		198		35	86				1		32	3	39		632
	5 Mos.			899	39	1	194	2	782	3	165	455	11	1	4	3		142	9	130	6	2,848
Tennessee	May			1003	5	3	121	3	713		261	200		17	4	2		108	13	43	3	2,499
	5 Mos.	9	2	5645	57	18	1486	13	4470	3	1773	1348	2	134	12	33	1	992	134	303	19	16,454
Texas	May	5		2074	17	15	219	2	1652	1	599	375		17	5	4		292	50	93	2	5,422
	5 Mos.	19	1	12144	70	37	2776	14	9746	1	3419	2292	6	112	33	34		1724	231	622	40	33,321
Utah	May			261	8		12		129		60	54	3	2	1			19	2	11	4	566
	5 Mos.			944	25	8	131		515	1	249	207	9	13	5	6		70	13	63	20	2,279
Vermont	May			72			11		57		35	34				1		9	1	15	3	238
	5 Mos.		3	362	1	3	169		252		166	169			1	6		50	4	84	7	1,277
Virginia	May	5	1	936	4	3	102	3	754		180	173		19	2	5		93	26	41	9	2,356
	5 Mos.	20	10	3427	11	25	663	14	2780	1	790	603		99	11	16		407	97	144	26	9,144
Washington	May			454		10	60		325		128	135	6	9	3	3		58	5	39	10	1,245
	5 Mos.	2		1858	14	31	358		1208		446	585	28	53	9	10	2	203	24	135	47	5,013
West Virginia	May			333	1	1	29	1	255	2	64	63		2	4			41	2	67	1	866
	5 Mos.		2	1378	3	7	309	6	1223	2	316	249		32	10	6		125	23	265	3	3,959
Wisconsin	May	1		751	6	7	60	2	605	4	92	214		6		5		64	30	16	1	1,864
	5 Mos.	5		3087	29	33	531	8	2368	26	473	978		42	18	29	1	350	90	98	36	8,202
Wyoming	May			186	1		26		132		59	54		2	1			26		60	2	549
	5 Mos.			644	6	2	137	1	375		185	167	1	3	2	2		76	4	148	2	1,756
Total	May, 1950	134	140	34607	427	349	3773	124	26945	21	7934	8290	59	726	129	234	39	3843	931	1905	176	90,788
Total	May, 1949	131	113	32882	451	378	10766	148	16446	29	7570	7487	22	529	86	346	17	5209	655	2742	368	86,375
Total	5 Months, 1950	807	807	150406	2195	1497	31593	499	119667	130	34687	38104	200	3918	768	1258	142	19244	4109	7954	931	418,916
Total	5 Months, 1949	838	678	141951	2548	1566	47784	653	69129	179	31708	38116	168	2557	164	1918	89	23279	3546	17533	1953	386,357

* Data from R. L. Polk & Co.

Truck Specifications Table

OF CURRENT PRODUCTION MODELS

DATA SUPPLIED BY MANUFACTURERS AND TABULATED BY

COMMERCIAL CAR JOURNAL

Key to Definitions, References and Abbreviations

DEFINITIONS

MAKE AND MODEL

Only Domestic Truck Models are listed.

OPTIONAL UNITS

For the express purpose of best fitting the truck to the individual job most of the models listed can be provided with optional engines, transmissions, axles, etc., and these models when so equipped are considered standard stock models.

CHASSIS LIST PRICE

The chassis list price applies to the minimum standard wheelbase with standard tires and standard equipment. All prices are F.O.B. factory. Chassis list price does not include the price of the Cab unless otherwise noted.

RECOMMENDED GROSS VEHICLE WEIGHT FOR NORMAL SERVICE

The Gross Weights published herewith are those supplied by manufacturers as their Recommended Gross Vehicle Weights for Normal Operating Conditions, and are based upon the Maximum Authorized Tire Size listed. In actual practice the manufacturer may either increase or decrease the gross vehicle weight rating when either favorable or unfavorable operating conditions are involved. Since the proper performance of a motor truck depends upon many factors, including grades, road conditions, etc., the gross weights that a manufacturer is prepared to recommend will vary with particular conditions, and the manufacturer's own standard of safety factors. Specific recommendations, therefore, should be obtained from the manufacturer's representative.

CHASSIS WEIGHT

The chassis weight listed includes the weight of the minimum standard wheelbase chassis, with cowl, with standard tires, with standard equipment, with crankcase and cooling system full, and 5 gallons of fuel in the tank. It does not include the weight of the Cab. This applies to C.O.E. as well as conventional chassis types. Exceptions are noted.

STANDARD TIRE SIZE

The standard tire size listed is that which is included in the Chassis List Price.

MAXIMUM AUTHORIZED TIRE SIZE

The tire size listed in this column is the maximum size recommended by the manufacturer of the chassis for the Gross Vehicle Weight for Normal Operating Conditions. It is furnished at extra cost, if it differs from the standard size. Dual rears are understood; exceptions noted.

MINIMUM STANDARD WHEELBASE

The minimum standard wheelbase is the so-called standard wheelbase on which the Chassis List Price is based.

MAXIMUM STANDARD WHEELBASE

The maximum standard wheelbase is the extreme end of the standard range of wheelbases offered by the chassis maker.

MAXIMUM BRAKE HP.

Maximum Brake Horsepower at Given R.P.M. is actual dynamometer reading without accessories.

GEAR RATIO RANGE

Gear Ratio Range in High—Ratios within the range given are available at no extra cost. Exceptions are noted.

TRACTORS

Unless given the designation (N)—meaning not available as a tractor—all standard models may be assumed to be available as tractors. Exclusively Tractor models are designated (T).

KEY TO REFERENCES

c.f.—Cab Forward design.
c.o.e.—Cab-Over-Engine design.
(D)—Diesel-engine equipped.
(T)—Designed for tractor use only.
(C)—Converted Ford or Chevrolet Model.

KEY TO ABBREVIATIONS

MAKES—ALL

B—Bendix
BL—Brown-Lipe.
Bu or Bud—Buda.
BW—Bendix-Westinghouse
C—Chevrolet.
Cl or Cla—Clark.
Con—Continental.
Cum—Cummins-Diesel.
Eat—Eaton.
F—Ford.
Fu—Fuller.
G-H—Goodyear-Hawley type.
H—Hotchkiss.
Her—Hercules.
HS—Hall-Scott.
L—Lockheed.
LH—Lockheed front, Wagner "hi-Tork" rear.
LT—Lockheed type front, Timken rear.
LW—Lockheed front, Wisconsin rear.
M—Midland.
N.P.—New Process.
O or Ow—Own.
Op or Opt—Optional
Shu—Shuler.
Spi—Spicer
T or Tim—Timken-Detroit Axle Co.
Tw—Timken-Detroit—Westinghouse.
TW—Timken-Detroit—Wisconsin.
WG—Warner Gear.
Wau—Waukesha.
W or Wis—Wisconsin.
Wg—Wagner "hi-Tork"
Ws—Westinghouse.
WW—Westinghouse or Wagner

WHEELS DRIVEN

2F—Forward unit of Rear Axle Group.
2R—Rear Unit of Rear Axle Group
4R—Forward and rear units of Rear Axle Group.
—All wheels.

BRAKES—SERVICE

Location

4—Four Wheels, front and rear.
4r—Four Wheels, rear only.

Type

I—Internal.
X—External

Operation

A—Air.
H—Hydraulic.
V—Vacuum.
D or Dp—Dual Primary

BRAKES—HAND

Location

C—Center of double propeller shaft.
2—Rear wheels.
4—Four wheels.
6—Six wheels.
P—Back of Power Divider.
J—Jackshaft.
T—Transmission.
F—Driveshaft.

Type

D—Tru-Stop disk.
I—Internal.
M—Mechanical.
X—External.
PD—Two drums on rear of power divider.

BRAKE DRUMS

Material

a—Cast alloy iron.
A—American Car Foundry
c—Cast iron.
Cc—Composite Front, Cast Iron in rear.
Ce—Centrifuse.
Cl—Copper iron.
Co—Composite.
D—Dayton.
E—Ermalite.
G—Gunite.
N—Nickel iron.
S—Steel.

(Where a combination of any of the above is used, the first reference mark applies to the front and the second to the rear drums.)

FRAME

Type

C—Channel.
T—Channel tapered front and rear.
L—Channel reinforced with liner.
B—Channel reinforced with both liner and fishplate.
P—Channel reinforced with plate.
TL—Channel tapered front and rear reinforced with liner.
D—Drop Center
Tf—Tapered front.
A—Straight section sidemembers, lined with oak inserts.
Z—Reinforced (X) member frame, box type sections.

REAR AXLE

Final Drive and Type

B—Bevel.
CD—Chain Drive
F—Full-floating.
H or Hy—Hypoid.
d—Dual range axle.
2—Double Reduction.
S—Spiral bevel.
W—Worm.
¾—Three Quarters Floating.
½—Semi-Floating
T—Torque Tube

GEAR RATIOS

(**) Only one ratio.

Drive and Torque

H—Hotchkiss (springs).
R—Radius Rods.
L—Parallel Torque Rods
T—Torque Arm.

GOVERNOR STANDARD

Y—Yes.
N—No.

(Turn to Page 82, Please)

(Continued from Page 81)

Line Number	MAKE AND MODEL	Chassis List Price	WHEELBASE Minimum Standard	WHEELBASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear: Standard Front and Rear	TIRE SIZES: Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings: Number Diameter and Length	Governor Standard	TRANSMISSION: Make and Model	TRANSMISSION: Forward Speeds	REAR AXLE: Make and Model	REAR AXLE: Gear and Type	REAR AXLE: Drive & Torque	REAR AXLE: Gear Ratio Range in High	FRONT AXLE: Make and Model	BRAKES SERVICE: Make Location Type Operation	BRAKES SERVICE: Lining Area	BRAKES SERVICE: Drum Area	BRAKES SERVICE: Drum Material	BRAKES: Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME: Side Rail Dimensions	FRAME: Type
1	Available																														
2	(c.o.e.)....200				15000	5500●	7.00/20D	8.25/20	Wau BM	6–3⅝x4 ¼	263	5.9	178	78–2800	7–2⅛x10 ¼	N	WG T9	4	Tim E100DPH	HF	H	** –6.20	Tim 32502H	L4IHV	314	534	a	TX	.....	10x3x ¼	T
3	(c.o.e.)....225				16500	6200●	7.50/20D	8.25/20	Wau BZ	6–4x4 ¼	320	5.9	235	105–3200	7–2⅛x10 ¼	N	WG T97	4	Tim E100DPH	HF	R	** –6.20	Tim 32502H	L4IHV	314	534	a	TX	.....	10x3x ¼	T
4	(c.o.e.)....250				20000	6400●	8.25/20D	9.00/20	Wau BZ	6–4x4 ¼	320	5.9	235	105–3200	7–2⅛x10 ¼	N	Fu 5A330	5	TimH100DPH	HF	R	–6.80	Tim 32502H	L4IHV	344	584	a	TX	.....	10x3x ¼	T
5	(c.o.e.)....400				22000	6800●	9.00/20D	10.00/20	Wau BZ	6–4x4 ¼	320	5.9	235	105–3200	7–2⅛x10 ¼	N	Fu 5A330	5	Tim L100DPH	HF	R	–6.83	Tim 35000H	L4IHV	370	642	a	TX	.....	12x3x ¼	T
6	(c.o.e.)....500				23000	7500●	9.00/20D	10.00/20	Wau MZA	6–4 ¼x4 ¾	404	5.6	285	130–3000	7–2⅛x12 ½	Y	Fu 5F430	5	Tim L100DPH	HF	R	–6.83	Tim 35000H	L4IHV	370	642	a	TX	.....	12x3x ¼	T
7	(c.o.e.)....550				28000	8100●	10.00/20D	11.00/20	Wau MZA	6–4 ¼x4 ¾	404	5.6	285	130–3000	7–2⅛x12 ½	Y	Fu 5F430	5	Tim Q100DPH	HF	R	–7.80	Tim 26452H	L4IHV	458	846	a	TX	.....	12x3x ¼	T
8	(c.o.e.)....550 X				32000	9600●	10.00/20D	11.00/24	Wau MZA	6–4 ¼x4 ¾	404	5.6	285	130–3000	7–2⅛x12 ½	Y	Fu 5F430	5	Tim S200DPH	2F	R	–7.84	Tim 26452H	L4IHV	576	1054	a	FD	.....	14x3x ¼	T
9	(c.o.e.)....600				28000	10000●	10.00/20D	11.00/24	Wau 140 GK	6–4 ½x5 ½	525	6.4	425	172–2600	7–3 ¼x13 ⅜	Y	Fu 5A650	5	Tim R100P	HF	R	–7.40	Tim 26452TW	L4IA	566	950	a	FD	.....	14x3x ¼	T
10	(c.o.e.)....601				28000	10900●	10.00/20D	11.00/24	Wau 145 GK	6–5 ¼x6	779	6.2	595	240–2400	7–3 ½x17 ¾	Y	Spi 7851	4	Tim R100P	HF	R	–7.40	Tim 26452TW	L4IA	566	950	a	FD	.....	14x3x ¼	T
11	(D) (c.o.e.)....602				28000	11200●	10.00/20D	11.00/24	Cum HB600	6–4 ¾x6	672	17.	500	150–1800	7–4 ½x16 ½	Y	Spi 7851	4	Tim R100P	HF	R	–7.40	Tim 26452TW	L4IA	566	950	a	FD	.....	14x3x ¼	T
12	Biederman....NSH		130	190	21000	6070	8.25/20D	10.00/20	Her JXLD	6–4x4 ½	339	6.9	272	131–3200	7–2 ½x10 ⅜	N	Fu 5A330	5	TimH700DPH	SF	H	** –7.2	Tim 35000HX	LH4IH	514	744	G	T	60	9x3x ¼	C
13	.....NSD		130	190	21000	6070	8.25/20D	10.00/20	Her JXLD	6–4x4 ½	339	6.9	272	131–3200	7–2 ½x10 ⅜	N	Fu 5A330	5	TimH700DPH	2D	H	6.13–8.15	Tim 35000HX	LH4IH	514	744	G	T	60	9x3x ¼	C
14	.....NSR		142	171	21000	7420	8.25/20D	10.00/20	Her JXLD	6–4x4 ½	339	6.9	272	131–3200	7–2 ½x10 ⅜	N	Spi 3541UP	5	TimH110DPH	HFd	H	** –6.4	Tim 35141PX	T4A	.....	.....	G	T	.....	9x3x ¼	C
15	.....HL		93	197	30000	12200	10.00/24D	12.00/24	Wau 140 GK	6–4 ½x5 ½	525	6.4	425	172–2600	7–3 ¼x13 ⅜	Y	Spi 6252A	5	Tim R200	HFd	H	6.41–8.37	Tim 36000 TW	T4A	.....	.....	G	T	81	10x3x ¼	C
16	Brown....R6572T		144	166	33000	.....	11.00/22	12.00/24	Con R6572	6–4 ¾x5 ¼	572	5.9	440	172–2600	7–3 ¼x14 ½	Y	Spi 6252B	5	Tim R100	Hy	H	** –5.28	Tim FE900	Ws4IA	.....	.....	a	2M	67	9 ¼x3 ½x ¼	Tf
17	.....140GKT		144	166	33000	.....	11.00/22	12.00/24	Wau 140GK	6–4 ½x5 ½	525	6.4	425	168–2400	7–2 ¾x13 ⅜	Y	Spi 6252B	5	Tim R100	Hy	H	** –5.28	Tim FE900	Ws4IA	.....	.....	a	2M	67	9 ¼x3 ½x ¼	Tf
18	(D).....HB600T		144	166	33000	.....	11.00/22	12.00/24	Cum HB600	6–4 ¾x6	672	17.	500	150–1800	7–4 ½x16 ½	Y	Fu 5A650	5	Tim R100	Hy	H	** –5.28	Tim FE900	Ws4IA	.....	.....	a	2M	67	9 ¼x3 ½x ¼	Tf
19	(D).....HRB600T		144	166	33000	.....	11.00/22	12.00/24	Cum HRB600	6–5 ⅛x6	743	15.	530	165–1800	.....	Y	Fu 5A920	5	Tim S200	2F	H	** –6.42	Tim FE900	Ws4IA	.....	.....	a	2M	67	9 ¼x3 ½x ¼	Tf
20	(D).....NHB600T		144	166	33000	.....	11.00/22	12.00/24	Cum NHB600	6–5 ⅛x6	743	15.	575	200–2100	.....	Y	Fu 5A920	5	Tim S200	2F	H	** –5.28	Tim FE900	Ws4IA	.....	.....	a	2M	67	9 ¼x3 ½x ¼	Tf
21	(D).....HRBB600T		144	166	33000	.....	11.00/22	12.00/24	Cum HRBB600	6–5 ⅛x6	743	15.	500	175–2000	.....	Y	Fu 5A650	5	Tim R100	Hy	H	** –5.28	Tim FE900	Ws4IA	.....	.....	a	2M	67	9 ¼x3 ½x ¼	Tf
22	(D)...6DA844T		144	166	33600	.....	11.00/22	12.00/24	Bu 6DC844	6–5 ¼x6 ½	844	...	640	210–2100	.....	Y	Spi 8045	4	Tim R300	.....	H	.....	Tim FE900	Ws4IA	.....	.....	a	2M	67	9 ¼x3 ½x ¼	Tf
23	Chevrolet.....HP	895	116	....	4600	▼2570	6.00/16S	158	O-Thrift Mas.	6–3 ½x3 ¾	216	6.6	176	92–3400	4– ♦ ♦	N	Own	4	Own	Hy	T	** –4.11	Own	O41H	150	242	Co	2I	39	5 ¼x2 ¼x ⅞	C
24	.....HR	990	125	....	5800	▼2880	158	7.50/17S	O-Thrift Mas.	6–3 ½x3 ¾	216	6.6	176	92–3400	4– ♦ ♦	N	Own	4	Own	HyF	H	†† –4.57	Own	O41H	176	272	Co	2I	48 ¼	5 ⅛x2 ¼x ⅞	C
25	†Fwd. Control.HT	1005	125	....	7000	▼2675	158	7.50/17S	O-Load Mas.	6–3 ⅞x3 ⅛	235	6.7	182	92–3400	4– ♦ ♦	N	Own	4	Own	HyF	H	** –5.14	Own	O41H	202	302	Co	2I	.....	5 ⅛x2 ¼x ⅞	C
26	.....HS	1060	137	....	8800	▼3175	7.00/17S	7.00/18	O-Thrift Mas.	6–3 ½x3 ¾	216	6.6	176	92–3400	4– ♦ ♦	N	Own	4	Own	HyF	H	** –5.14	Own	O41H	248	371	Co	2I	60	7x2 ¼x ½	C
27	†Fwd. Control.HU	1095	137	....	10000	▼2915	7.00/17S	7.00/18	O-Load Mas.	6–3 ⅞x3 ⅛	235	6.7	182	92–3400	4– ♦ ♦	N	Own	4	Own	HyF	H	** –5.14	Own	O41H	248	371	Co	2I	.....	7x2 ¼x ⅞	C
28	.....TJ	1120	137	....	12500	▼3575	7.00/20S	7.50/20	O-Thrift Mas. ::	6–3 ½x3 ¾	216	6.6	176	92–3400	4– ♦ ♦	N	Own	4	Own	Hy	H	▫ –6.17	Own	O41H	330	478	Co	2I	60	7x2 ¼x ⅞	C
29	.....TK	1155	161	....	12500	▼3685	7.00/20S	7.50/20	O-Thrift Mas. ::	6–3 ½x3 ¾	216	6.6	176	92–3400	4– ♦ ♦	N	Own	4	Own	Hy	H	▫ –6.17	Own	O41H	330	478	Co	2I	84	8 ⅛x2 ⅛x ¼	C
30	(School bus)..TL	1300	161	....	12000	▼4115	6.50/20D	7.00/20	O-Thrift Mas. ::	6–3 ½x3 ¾	216	6.6	176	92–3400	4– ♦ ♦	Y	Own	4	Own	HyF	H	▫ –6.17	Own	O41H	330	478	Co	2I	60	8 ⅛x2 ⅛x ¼	C
31	.....TVS	1440	137	....	15000	▼4220	7.50/20D	9.00/20♠¶	O-Load Mas.	6–3 ⅞x3 ⅛	235	6.7	193	105–3600	4– ♦ ♦	Y	Own	4	Own	HyF	H	▫ –6.17	Own	O41H	330	478	Co	2I¶¶	.....	8 ⅛x2 ⅛x ¼	C
32	.....TWS	1475	161	....	15000	▼4295	7.50/20D	9.00/20♠●	O-Load Mas.	6–3 ⅞x3 ⅛	235	6.7	193	105–3600	4– ♦ ♦	Y	Own	4	Own	HyF	H	▫ –6.17	Own	O41H	330	478	Co	2I	84	8 ⅛x2 ⅛x ¼	C
33	(c.o.e.).....TPS	●1795	110	....	15000	●▼4390	7.50/20D	9.00/20♠●	O-Load Mas.	6–3 ⅞x3 ⅛	235	6.7	190	100–3500	4– ♦ ♦	Y	Own	4	Own	HyF	H	▫ –6.17	Own	O41H	330	478	Co	2I	60 ½	8 ⅛x2 ⅛x ¼	C
34	(c.o.e.).....TRS	●1830	134	....	15000	●▼4780	7.50/20D	9.00/20♠●	O-Load Mas.	6–3 ⅞x3 ⅛	235	6.7	190	100–3500	4– ♦ ♦	Y	Own	4	Own	HyF	H	▫ –6.17	Own	O41H	330	478	Co	2I	84 ½	8 ⅛x2 ⅛x ¼	C
35	(c.o.e.).....TSS	●1865	158	....	15000	●▼4875	7.50/20D	9.00/20♠●	O-Load Mas.	6–3 ⅞x3 ⅛	235	6.7	190	100–3500	4– ♦ ♦	Y	Own	4	Own	HyF	H	▫ –6.17	Own	O41H	330	478	Co	2I	108 ½	8 ⅛x2 ⅛x ¼	C
36	(c.o.e.).....TP	●1795	110	....	16000	●▼4690	7.50/20D	9.00/20♠●	O-Load Mas.	6–3 ⅞x3 ⅛	235	6.7	190	100–3500	4– ♦ ♦	Y	Own	4	Own	HyF	H	▫ –6.17	Own	O41H	330	478	Co	2I	60 ½	8 ⅛x2 ⅛x ¼	C
37	(c.o.e.).....TR	●1830	134	....	16000	●▼4780	7.50/20D	9.00/20♠●	O-Load Mas.	6–3 ⅞x3 ⅛	235	6.7	190	100–3500	4– ♦ ♦	Y	Own	4	Own	HyF	H	▫ –6.17	Own	O41H	330	478	Co	2I	84 ½	8 ⅛x2 ⅛x ¼	C
38	(c.o.e.).....TS	●1865	158	....	16000	●▼4875	7.50/20D	9.00/20♠●	O-Load Mas.	6–3 ⅞x3 ⅛	235	6.7	190	100–3500	4– ♦ ♦	Y	Own	4	Own	HyF	H	▫ –6.17	Own	O41H	330	478	Co	2I	108 ½	8 ⅛x2 ⅛x ¼	C
39	.....TV	1440	137	....	16000	▼4220	7.50/20D	9.00/20♠¶	O-Load Mas.	6–3 ⅞x3 ⅛	235	6.7	193	105–3600	4– ♦ ♦	Y	Own	4	Own	HyF	H	▫ –6.17	Own	O41H	330	478	Co	2I¶¶	.....	8 ⅛x2 ⅛x ¼	C
40	.....TW	1475	161	....	16000	▼4295	7.50/20D	9.00/20♠¶	O-Load Mas.	6–3 ⅞x3 ⅛	235	6.7	193	105–3600	4– ♦ ♦	Y	Own	4	Own	HyF	H	▫ –6.17	Own	O41H	330	478	Co	2I	84	8 ⅛x2 ⅛x ¼	C
41	(School bus)..TX	1520	199	....	15000	▼4650	7.50/20D	8.25/20	O-Load Mas.	6–3 ⅞x3 ⅛	235	6.7	193	105–3600	4– ♦ ♦	Y	Own	4	Own	HyF	H	▫ –6.17	Own	O41H	330	478	Co	2I¶¶	.....	8 ⅛x2 ⅛x ¼	C
42	Corbitt....G101B■		137	....	22000	.....	9.00/20	10.00/20	Con M6330	6–4x4 ¾	330	6.1	248	104–2800	7–2 ⅝x12	Y	Cla 205V	5	Tim L100	HF	H	4.11–7.40	Tim 32502	LT4IHV	466	820	a	TX	61	8x3 ¼x ¼	T
43	.....G301B■		155	....	26000	.....	10.00/22	11.00/22	Con B6371	6–4 ½x4 ⅝	371	6.0	280	100–2600	7–2 ½x13 ½	Y	Fu 5A43	5	Tim Q200	2F	H	7.77–8.53	Tim 35100	LT4IHV	730	1016	a	TX	71	8 ¼x3 ¼x ⅛	T
44	.....G302B■		145	....	28000	.....	10.00/22	11.00/22	Con B6427	6–4 ¼x4 ⅞	427	5.9	325	127–2600	7–2 ½x13 ½	Y	Fu 5A43	5	Tim R300	2F	H	6.41–8.37	Tim 35100	Ws4IA	598	950	a	TX	61	8 ¼x3 ¼x ⅛	T
45	.....G402B30		145	....	30000	.....	10.00/22	11.00/24	Con T6427	6–4 ¼x4 ⅞	427	6.3	336	151–2600	7–2 ½x13 ½	Y	Fu 5A43	5	Tim S200	2F	H	5.91–9.76	Tim 35100	Ws4IA	672	1054	a	TX	61	10 ¼x3 ¼x ¼	TL
46	.....G601B32		155	....	32000	.....	10.00/22	11.00/24	Con R6513	6–4 ½x5 ⅛	513	5.9	400	170–2600	7–3 ¼x14 ½	Y	Spi 6253	5	Tim S200	2F	H	5.91–9.76	Tim FE900	Ws4IA	672	1054	a	TD	72	10 ¼x3 ¼x ¼	TL
47	.....G603B34		155	....	34000	.....	10.00/20	12.00/24	Con R6602	6–4 ⅞x5 ⅜	602	5.9	464	200–2600	7–3 ¼x14 ½	Y	Fu 5A65	5	Tim U200	2F	H	5.91–9.76	Tim FE900	Ws4IA	672	1054	a	TD	72	10 ¼x3 ¼x ¼	TL
48	(T).....G101T20		137	....	20000	....	8.25/20	9.00/20	Con M6330	6–4x4 ¾	330	6.1	248	104–2800	7–2 ⅝x12	Y	Cla 205V	5	Tim H100	HF	H	** –5.29	Tim 32502	Ws4IA	418	642	a	TX	61	7 ⅛x3 ¼x ⅛	T
49	(T).....G302T22		137	....	22000	....	9.00/20	10.00/22	Con B6427	6–4 ¼x4 ⅞	427	5.9	325	127–2600	7–2 ½x13 ½	Y	Fu 5A43	5	Tim L100	HF	H	** –5.29	Tim 32502	Ws4IA	490	746	a	TX	61	7 ⅛x3 ¼x ⅛	T
50	(T).....G402T22		145	....	25000	....	10.00/20	10.00/22	Con T6427	6–4 ¼x4 ⅞	427	6.3	336	151–2600	7–2 ½x13 ½	Y	Fu 5A43	5	Tim Q100	HF	H	5.29–6.83	Tim 35000	Ws4IA	562	850	a	TX	61	8x3 ¼x ¼	T
51	(T).....G602T27		147	....	28000	....	10.00/22	11.00/24	Con R6572	6–4 ¾x5 ⅜	572	5.9	440	189–2600	7–3 ¼x14 ½	Y	Spi 6253	5	Tim R100	HF	H	6.17–7.40	Tim 35100	Ws4IA	598	950	a	2M	64	8 ¼x3 ¼x ⅛	T
52	(T)(D) D202T20		137	....	20000	....	8.25/20°	9.00/20	Her DJXH	6–3 ¾x4 ½	298	15.	233	99–2600	7–3x10 ¼	Y	Cla 205VO	5	Tim H300	2dF	H	6.13–8.15	Tim 32502	Ws4IA	418	642	a	TX	61	7 ⅛x3 ¼x ⅛	T
53	(T)(D) D401T23		145	....	23000	....	10.00/20	10.00/22	Her DWXD	6–4 ¼x4 ¾	404	15.	404	135–2600	7–3 ½x11 ⅝	Y	Fu 5A430	5	Tim L300	2dF	H	6.32–8.22	Tim 35000	Ws4IA	490	746	a	TX	61	8x3 ¼x ¼	T
54	(T)(D) D402T25		145	....	25000	....	10.00/20	10.00/22	Her DWXLD	6–4 ¼x5	426	15.	336	142–2600	7–3 ½x11 ⅝	Y	Fu 5A430	5	Tim Q300	2dF	H	6.53–8.53	Tim 35000	Ws4IA	562	850	a	TX	61	8x3 ¼x ¼	T
55	(T)(D) D601T27		150	....	27000	....	10.00/22	11.00/24	Her DRXC	6–4 ⅝x5 ¼	529	15.	400	147–2200	7–3 ½x13 ¾	Y	Spi 6253	5	Tim R300	2dF	H	6.41–8.37	Tim 35100	Ws4IA	598	950	a	2M	67	8 ¼x3 ¼x ⅛	T
56	(T)(D) D800 Ser.‡‡		160	....	30000	....	10.00/22	11.00/24	Cum HB600	6–4 ½x6	672	17.	500	150–1800	7–4 ½x16 ½	Y	Fu 5C720	5	Tim R100	HF	H	5.29–6.83	Tim FE900	Ws4IA	598	950	a	2M	66	8 ¼x3 ¼x ⅛	T
57	(T)(D) D803T32		160	....	32000	....	10.00/22	11.00/24	Cum NHB600	6–5 ½x6	743	17.	575	200–2100	7–4 ½x16 ½	Y	Fu 5C720	5	Tim S200	2F	H	5.91–7.21	Tim FE900	Ws4IA	672	1054	a	TD	66	8 ¼x3 ¼x ⅛	T
58	Crosley.....B		80	....	2130	1330°°	4.50/12	.....	Own	4–2 ½x2 ¼	44	7.8	33	26–5400	5–♦	..	WG-ASI-T92	3	Spi	2F	..	** –5.17	Own	B4IH	65 ⅞	....	c	2	.....	.....	C
59	Dodge.....B-2-B		108	108	4850	.....	6.00/16S	6.50/16S	Own T-172	6–3 ¼x4 ⅛	217	6.6	172	96–3600	4–2 ½x4.8	N	NP-88840	3	Own T172	H ½	H	4.1 –4.78	Own T172	O41H	175	264	cE	TX	40	⅞x2 ⅞x6 ⅞	C
60	.....B-2-C		116	116	5800	.....	7.00/15S	7.00/15S	Own T-174	6–3 ¼x4 ⅛	217	6.6	172	96–3600	4–2 ½x4.8	N	NP-88840	3	Own T174	H ½	H	4.1 –4.78	Own T174	O41H	184	277	Co	TX	48	⅞x2 ⅞x6 ⅞	C
61	.....B-2-D		116	126	8000	.....	6.00/16S^	6.00/20	Own T-176	6–3 ¼x4 ⅛	230	6.7	187	102–3600	4–2 ½x4.8	N	NP-88770	3	Own T176	HyF	H	3.9 –4.89	Own T176	O41H	209	316	Co	TX	48	⅞x2 ⅞x6 ⅞	C
62	Rt. Van Sp. B1DU		102	117	7900	.....	6.50/16S^	8.25/16S	Own T-164	6–3 ¼x4 ⅛	230	6.6	186	94–3200	4–2 ½x4.8	N	NP-88490	3	Own T164	HyF	H	3.9 –4.89	Own T164	O41H	209	316	Co	TX	.....	⅞x2 ⅞x6 ⅞	C
63	Rt. Van Sp. B1EU		102	142	10100	.....	7.50/16S●	9.00/16S	Own T-165	6–3 ¼x4 ⅛	230	6.6	186	94–3200	4–2 ½x4.8	N	NP-88500	4	Own T165	HyF	H	4.89–5.8	Own T165	O41H	234	355	Co	TX	.....	⅞x2 ⅞x6 ⅞	C
64	.....B-2-FL		128	152	9500	.....	6.00/20‡	6.50/20	Own T-178	6–3 ⅞x4 ¼	236	6.6	192	109–3600	4–2 ½x5.04	N	NP-39760	4	Own T178	HyF	H	5.6 –6.8	Own T178	O41H	336	479	..	TX	60	21x2 ¼x7	C
65	.....B-2-F		128	170	13500	.....	6.00/20‡	8.25/20♣	Own T-178	6–3 ⅞x4 ¼	236	6.6	192	109–3600	4–2 ½x5.04	N	NP-39760	4	Own T178	HyF	H	5.6 –6.8	Own T178	O41H	336	479	..	TX	60	21x3 ¼x7	C
66	.....B-2-FA		128	170	13500	.....	6.50/20	7.50/20♣	Own T-178	6–3 ⅞x4 ¼	236	6.6	192	109–3600	4–2 ½x5.04	Y	NP-39760	4	Eat A4-1350	SFd	H	5.83–8.11	Own T178	O41H	336	479	Co	TX	60	21x3 ¼x7	C
67	.....B-2-G		128	192	14500	.....	6.50/20¶	8.25/20	Own TX-178	6–3 ⅞x4 ¼	236	6.6	192	109–3600	4–2 ½x5.04	N	NP-88570	4	Own TX-178	HyF	H	5.6 –6.8	Own TX-178	O41H	336	479	Co	TX	60	21x2 ⅛x8 ⅛	C
68	.....B-2-GA		128	192	14500	.....	6.50/20¶	8.25/20	Own TX-178	6–3 ⅞x4 ¼	236	6.6	192	109–3600	4–2 ½x5.04	Y	NP-88570	4	Eat A5-1350	SFd	H	5.8 –8.8	Own TX-178	O41H	336	479	Co	TX	60	21x2 ⅛x8 ⅛	C
69	.....B-2-GM		107	161	14750	.....	6.50/20	8.25/20	Own TX-182	6–3 ⅞x4 ¼	236	6.6	192	109–3600	4–2 ½x5.04	N	NP-88850	4	Own TX-182	HyF	H	5.6 –6.8	Own TX-182	O41H	336	479	Co	TX	60	21x2 ⅛x8 ⅛	C

¶—8.25/20 front tires are required when 9.00/20 dual rears are used.

°°—Pick-up truck; panel delivery 1360.

●—Includes cab.

¶—Front only; Rear 7.50/20

(Turn to Page 84, Please)

::—Own Loadmaster engine available on models TJ-TK-TL at extra cost.

■—5.43 axle available on Models TJ-TK-TL and 2-speed axle available on TVS-TWS-TP-TPS-TR-TRS-TS-TSS-TV-TW-TX.

•—Front only, rear 8.25/16.

‡—Front only: Rear 6.50/20S.

▲—7.50/20 can be used on the front with no decrease in G.V.W. when 8.25/20 are used on dual rear wheels.

■—Available with optional tires and axles for less G.V.W. rating.

‡‡—Also available with Cummins HRB600, HRBB600, and NHB600.

†—Forward control Chassis for Door-to-Door delivery bodies. These chassis do not have cowl.

††—Also available in 5.14 ratio.

▲—Front only; Rear 7.00/16S.

♦—1 Front 1.375x1.312; 3 Center 1.375x.870; 1 Rear 1.500x1.499.

§—4-speed transmission available.

¶¶—Diameter: (Average) Front, 2.6858; Front Center, 2.7168; Rear Center, 2.7478; Rear, 2.7788; Total length, 5 ⅛.

▼—Includes spare tire, full fuel tank and cooling system.

♣—For only single rear; Dual rear are 7.50/20.

♦♦—Propeller shaft type available at extra cost.

"500,000 EXTRA POUNDS OF PAYLOAD A YEAR WITH LIGHTWEIGHT BROWN ALUMINUM TRAILERS"

Says Motor Cargo, Inc., of Akron, Ohio

MOTOR CARGO, INC., hauls between New York and St. Paul and serves intermediate points. Refrigerated freight with its extra responsibilities is a substantial part of their business. Fourteen Brown refrigerated units are included in their Brown fleet. "Helps," says Motor Cargo, "to give the needed extra care to perishables."

Browns' bonus payloads amount to over half a million pounds annually for this progressive company. Figure your average rate times that, and you can see why Browns soon pay for themselves.

Repairs are easily made on Browns because of their simple sectional construction, Motor Cargo reports, and parts are readily accessible from cooperative Brown representatives. Drivers prefer Browns, too, because they are "very maneuverable and easy to handle."

On all counts Browns score. It will pay you to compare Browns — let the scale tell the tale.

The Scale Tells the Tale

Brown ALUMINUM TRAILERS

Toledo, Ohio • Spokane, Wash.

Distributors in Principal Cities

(Continued from Page 82)

Line Number	MAKE AND MODEL	Chassis List Price	WHEELBASE Minimum Standard	WHEELBASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES (D-dual rear S-single rear) Standard front and Rear	TIRE SIZES Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number Diameter and Length	Governor Standard	TRANSMISSION Make and Model	Forward Speeds	REAR AXLE Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE Make and Model	BRAKES SERVICE Make Location Type Operation	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME Side Rail Dimensions	Type
	Dodge—Cont'd.																														
1	B-2-GMA		107	161	14750		6.50/20	8.25/20	Own TX-182	6-3 7/16 x4 1/4	236	6.6	192	109-3600	4-2 1/2 x5.01	Y	NP-88850	4	Eat A5-1350	SFd	H	5.8 -8.8	Own TX-182	O4IH	336	479	Co	TX	60	.21x2 ||| x8	C
2	B-2-H		128	192	16000		7.50/20	8.25/20	Own T-192	6-3 7/16 x4 1/4	236	6.6	192	109-3600	4-2 1/2 x5.01	Y	NP-88570	4	Own T-192	HyF	H	6.2 -6.8	Own T-192	O4IHV	336	479	Co	TX	60	.21x2 ||| x8	C
3	B-2-HA		128	192	16000		7.50/20	8.25/20	Own T-192	6-3 7/16 x4 1/4	236	6.6	192	109-3600	4-2 1/2 x5.01	Y	NP-88570	4	Eat A5-1350	SFd	H	5.8 -8.8	Own T-192	O4IHV	336	479	Co	TX	60	.21x2 ||| x8	C
4	B-2-HM		107	161	16250		7.50/20	8.25/20	Own T-194	6-3 7/16 x4 1/4	236	6.6	192	109-3600	4-2 1/2 x5.01	Y	NP-88850	4	Own T-194	HyF	H	6.2 -6.8	Own T-194	O4IHV	336	479	Co	TX	60	.21x2 ||| x8	C
5	B-2-HMA		107	161	16250		7.50/20	8.25/20	Own T-194	6-3 7/16 x4 1/4	236	6.6	192	109-3600	4-2 1/2 x5.01	Y	NP-88850	4	Eat A5-1350	SFd	H	5.8 -8.8	Own T-194	O4IHV	336	479	Co	TX	60	.21x2 ||| x8	C
6	B-2-HH		128	192	16000		7.50/20	8.25/20	Own T-192	6-3 7/16 x4 1/4	236	6.6	192	109-3600	4-2 1/2 x5.01	Y	NP-88570	4	Own T-192	HyF	H	6.2 -6.8	Own T-192	O4IHV	336	479	Co	TX	60	.21x2 ||| x8	C
7	B-2-HHA		128	192	16000		7.50/20	8.25/20	Own T-192	6-3 7/16 x4 1/4	236	6.6	192	109-3600	4-2 1/2 x5.01	Y	NP-88570	4	Eat A5-1350	SFd	H	5.8 -8.8	Own T-192	O4IHV	336	479	Co	TX	60	.21x2 ||| x8	C
8	B-2-HHM		107	161	16250		7.50/20	8.25/20	Own T-194	6-3 7/16 x4 1/4	236	6.6	192	109-3600	4-2 1/2 x5.04	Y	NP-88850	4	Own T-194	HyF	H	6.2 -6.8	Own T-194	O4IHV	336	479	Co	TX	60	.21x2 ||| x8	C
9	B-2-HHMA		107	161	16250		7.50/20	8.25/20	Own T-194	6-3 7/16 x4 1/4	236	6.6	192	109-3600	4-2 1/2 x5.04	Y	NP-88850	4	Eat A5-1350	SFd	H	5.8 -8.8	Own T-194	O4IHV	336	479	Co	TX	60	.21x2 ||| x8	C
10	B-2-JL		128	212	17000		6.00/20	8.25/20	Own T-180	6-3 7/16 x4 1/2	250	6.6	204	114-3600	4-2 1/2 x5.01	Y	NP-88700	5	Own T-180	HyF	H	6.2 -7.16	Own T-180	O4IHV	396	553	e	TX	60	1/2x2 ||| x8	P
11	B-2-JAL		128	212	17000		6.00/20	8.25/20	Own T-180	6-3 7/16 x4 1/2	250	6.6	204	114-3600	4-2 1/2 x5.01	Y	NP-88700	5	Eat A5-1350	SFd	H	5.8 -8.8	Own T-180	O4IHV	396	553	e	TX	60	1/2x2 ||| x8	P
12	B-2-J		128	212	17000		6.50/20	8.25/20	Own T-180	6-3 7/16 x4 1/2	250	6.6	204	114-3600	4-2 1/2 x5.01	Y	NP-88700	5	Own T-180	HyF	H	6.2- 7.16	Own T-180	O4IHV	396	553	e	TX	60	1/2x2 ||| x8	P
13	B-2-JA		128	212	17000		6.50/20	8.25/20	Own T-180	6-3 7/16 x4 1/2	250	6.6	204	114-3600	4-2 1/2 x5.01	Y	NP-88700	5	Eat A5-1350	SFd	H	5.8 -8.8	Own T-180	O4IHV	396	553	e	TX	60	1/2x2 ||| x8	P
14	B-2-JML		107	161	17250		6.00/20	8.25/20	Own T-184	6-3 7/16 x4 1/2	250	6.6	204	114-3600	4-2 1/2 x5.01	Y	NP-88920	5	Own T-184	HyF	H	6.2 -7.16	Own T-184	O4IHV	396	553	e	TX	60	1/2x2 ||| x8	P
15	B-2-JMAL		107	161	17250		6.00/20	8.25/20	Own T-184	6-3 7/16 x4 1/2	250	6.6	204	114-3600	4-2 1/2 x5.01	Y	NP-88920	5	Eat A5-1350	SFd	H	5.8 -8.8	Own T-184	O4IHV	396	553	e	TX	60	1/2x2 ||| x8	P
16	B-2-JM		107	161	17250		6.50/20	8.25/20	Own T-184	6-3 7/16 x4 1/2	250	6.6	204	114-3600	4-2 1/2 x5.01	Y	NP-88920	5	Own T-184	HyF	H	6.2 -7.16	Own T-184	O4IHV	396	553	e	TX	60	1/2x2 ||| x8	P
17	B-2-JMA		107	161	17250		6.50/20	8.25/20	Own T-184	6-3 7/16 x4 1/2	250	6.6	204	114-3600	4-2 1/2 x5.04	Y	NP-88920	5	Eat A5-1350	SFd	H	5.8 -8.8	Own T-184	O4IHV	396	553	e	TX	60	1/2x2 ||| x8	P
18	B-2-KL		128	212	17500		8.25/20▲	9.00/20	Own TX-180	6-3 7/16 x4 1/2	250	6.6	204	114-3600	4-2 1/2 x5.04	Y	NP-88700	5	Eat 16500	SFd	H	6.14-9.04	Own T-180	O4IHV	396	553	e	TX	60	1/2x2 ||| x8	P
19	B-2-KAL		128	212	17500		8.25/20▲	9.00/20	Own TX-180	6-3 7/16 x4 1/2	250	6.6	204	114-3600	4-2 1/2 x5.01	Y	NP-88700	5	Tim H-101	HyF	H	6.8 -7.2	Own T-180	O4IHV	396	553	e	TX	60	1/2x2 ||| x8	P
20	B-2-K		128	212	17500		8.25/20▲	9.00/20	Own TX-180	6-3 7/16 x4 1/2	250	6.6	204	114-3600	4-2 1/2 x5.04	Y	NP-88700	5	Tim H-101	HyF	H	6.8 -7.2	Own T-180	O4IHV	396	553	e	TX	60	1/2x2 ||| x8	P
21	B-2-KA		128	212	17500		8.25/20▲	9.00/20	Own TX-180	6-3 7/16 x4 1/2	250	6.6	204	114-3600	4-2 1/2 x5.04	Y	NP-88700	5	Eat 16500	SFd	H	6.14-9.04	Own T-180	O4IHV	396	553	e	TX	60	1/2x2 ||| x8	P
22	B-2-KML		107	161	17750		8.25/20▲	9.00/20	Own TX-184	6-3 7/16 x4 1/2	250	6.6	204	114-3600	4-2 1/2 x5.04	Y	NP-88920	5	Eat 16500	SFd	H	6.14-9.04	Own T-184	O4IHV	396	553	e	TX	60	1/2x2 ||| x8	P
23	B-2-KMAL		107	161	17750		8.25/20▲	9.00/20	Own TX-184	6-3 7/16 x4 1/2	250	6.6	204	114-3600	4-2 1/2 x5.04	Y	NP-88920	5	Tim H-101	HyF	H	6.8 -7.2	Own T-184	O4IHV	396	553	e	TX	60	1/2x2 ||| x8	P
24	B-2-KM		107	161	17750		8.25/20▲	9.00/20	Own TX-184	6-3 7/16 x4 1/2	250	6.6	204	114-3600	4-2 1/2 x5.01	Y	NP-88920	5	Tim H-101	HyF	H	6.8 -7.2	Own T-184	O4IHV	396	553	e	TX	60	1/2x2 x8	P
25	B-2-KMA		107	161	17750		8.25/20▲	9.00/20	Own TX-184	6-3 7/16 x4 1/2	250	6.6	204	114-3600	4-2 1/2 x5.04	Y	NP-88920	5	Eat 16500	SFd	H	6.14-9.04	Own T-184	O4IHV	396	553	e	TX	60	1/2x2 ||| x8	P
26	B-2-R		130	229	19000		7.50/20	9.00/20	Own T-186	6-3 3/4 x4 5/8	306	6.4	245	122-3200	7-3x11.23	Y	NP-88220	5	Tim H-100	HyF	H	** -6.8	Own T-186	O4IHV	397	609	e	TX	60	1/2x2 ||| x9	P
27	B-2-RA		130	229	19000		7.50/20	9.00/20	Own T-186	6-3 3/4 x4 5/8	306	6.4	245	122-3200	7-3x11.23	Y	NP-88220	5	Tim H-300	HFd	H	6.14-8.15	Own T-186	O4IHV	397	609	e	TX	60	1/2x2 ||| x9	P
28	B-2-T		130	190	21000		7.50/20△	10.00/20	Own T-188	6-3 3/4 x5	331	6.4	270	128-3000	7-3x11.23	Y	NP-88450	5	Tim L-100	HyF	H	6.8 -8.2	Tim 32500	O4IHV	425	666	e	TX	60	1/2x3x10	P
29	B-2-TA		130	190	21000		7.50/20△	10.00/20	Own T-188	6-3 3/4 x5	331	6.4	270	128-3000	7-3x11.23	Y	NP-88450	5	Tim L-300	HFd	H	6.3 -9.18	Tim 32500	O4IHV	425	666	e	TX	60	1/2x3x10	P
30	B-2-V		130	190	23000		9.00/20†	11.00/20	Own TX-188	6-3 3/4 x5	331	6.4	270	128-3000	7-3x11.23	Y	NP-88450	5	Tim Q-100	HyF	H	6.8 -7.8	Tim 32500	O4IHV	486	770	e	TX	60	1/2x3x10	P
31	B-2-VA		130	190	23000		9.00/20†	11.00/20	Own TX-188	6-3 3/4 x5	331	6.4	270	128-3000	7-3x11.23	Y	NP-88450	5	Tim Q-300	HFd	H	6.5 -9.5	Tim 32500	O4IHV	486	770	e	TX	60	1/2x3x10	P
32	B2YL, YAL, Y, YA School Buses		130	190	28000		9.00/20†	11.00/22	Own T-190	6-4x5	377	6.5	330	154-3000	7-3x11.23	Y	Cla-290-V2	5	Tim Q-100	HyF	H	††	Tim 32500	O4IHV	486	770	e	TX	60	1/2x3 1/2x10	P
33	B-2-FS		152	170	13500		6.50/20	7.50/20	Own TS-178	6-3 7/16 x4 1/4	236	6.6	192	109-3600	4-2 1/2 x5.04	N	NP-39760	4	Own TS-178	HyF	H	5.6 -6.8	Own TX-178	O4IHV	336	479	Co	TX	.....	1/2x2 ||| x7	C
34	B2-GS		192	192	15000		7.50/20	8.25/20-10	Own TXS-178	6-3 7/16 x4 1/4	236	6.6	192	109-3600	4-2 1/2 x5.04	N	NP-88570	4	Own TX-178	HyF	H	5.6 -6.8	Own TX-178	O4IHV	336	479	Co	TX	.....	1/2x2 1/2x8	C
35	B2-HHS		192	192	15500		7.50/20	8.25/20	Own TS-192	6-3 7/16 x4 1/4	236	6.6	192	109-3600	4-2 1/2 x5.04	Y	NP-88570	4	Own TS-192	HyF	H	6.2 -6.8	Own T-192	O4IHV	336	479	Co	TX	.....	1/2x2 1/2x8	C
36	B-2-JS		212	212	17000		7.50/20	8.25/20	Own TS-180	6-3 7/16 x4 1/2	250	6.6	204	114-3600	4-2 1/2 x5.04	Y	NP-88700	5	Own TS-180	HyF	H	6.2 -7.16	Own T-180	O4IHV	396	553	e	TX	.....	1/2x2 1/2x8	P
37	B-2-RS		229	229	19000		8.25/20	9.00/20	Own TS-186	6-3 3/4 x4 5/8	306	6.4	245	122-3200	7-3x11.23	Y	NP-88220	5	Tim H100	HyF	H	6.8	Own T-186	O4IHV	397	609	e	TX	.....	1/2x2 ||| x9	P
38	Duplex T		136	220	20000	6600	8.25/20D	9.00/20	Her JXD	6-4x4 1/4	320	6.2	240	113-3000	7-2 1/4 x10	Y	Fu 5B330	5	Tim H100	B	H	** -7.20	Tim 32502	L4IHV	420	654	A	TX	57 1/4	9 1/2x3 1/2x	C
39	TH-404		136	220	20000	6900	8.25/20D	9.00/20	Her WXLC3	6-4 1/4 x4 3/4	404	5.8	312	139-2600	7-2 5/8 x13 1/4	Y	Fu 5A430	5	Tim H-300	DF	H	6.13-8.15	Tim 32502	L4IHV	420	654	A	TX	49 1/4	9 1/2x3 1/2x	C
40	R		136	220	28000	8820	9.00/20D	10.00/20	Her WXLC-3	6-4 1/4 x4 3/4	404	5.8	312	139-2600	7-2 5/8 x13 1/4	Y	Fu 5A430	5	Tim Q300	DF	R	6.53-8.53	Tim 35100	L4IHV	730	1016	A	TX	49 1/4	9 1/4 x2 1/2 x3 1/2 x	C
41	8H-501		172	208	28000	9500	10.00/20	11.00/20	Her RXB	6-4 1/2 x5 1/4	501	5.4	360	137-2400	7-3x13 1/4	.	Fu 5A620	.	Tim Q200	2F	R	** -7.77	Tim 35100	BW41A	730	1016	A	TX	61 1/4	9 1/4 x2 1/2 x3 1/2 x	C
42	JHA		148	220	32000	9800	10.00/20D	11.00/20	Her RXB	6-4 1/2 x5 1/4	501	5.4	360	137-2400	7-3x13 1/4	Y	Fu 5A620	5	Tim S200	2F	R	** -9.83	Tim 26450	BW41A	912	1311	A	TX	61 1/4	10 1/2x3 1/2x	C
43	JH-558		148	220	32000	9800	10.00/20D	11.00/20	Her RXLD	6-4 1/2 x5 1/4	558	5.4	430	154-2400	7-3 1/2 x13 1/4	Y	Fu-5C650	5	Tim S-300	DF	R	6.41-8.37	Tim 26450	BW41A	912	1311	A	TX	60 1/4	10 1/2x3	C
44	KH		148	220	34000	10500	11.00/20D	11.00/20	Her RXC	6-4 3/4 x5 1/4	529	5.4	395	132-2300	7-3x13 1/4	Y	Fu 5A620	5	Tim U-200	2F	R	** -9.83	Tim 26450	BW41A	912	1311	A	TX	60 1/4	10 1/2x3 1/2x	C
45	LH		148	220	37000	11300	11.00/20D	11.00/20	Her RXLD	6-4 3/4 x5 1/4	558	5.4	430	154-2400	7-3 1/2 x13 1/4	Y	Fu 5C650	5	Tim U-200	2F	R	** -9.83	Tim 26450	BW41A	912	1311	A	TX	60 1/4	10 1/2x3 1/2x	C
46	Federal 15M		135	194	14500	4080	6.50/20D	7.50/20	Here JXEF	6-3 1/2 x4 1/4	245	...	184	93-3400	7-2 1/2 x10	N	WGT9A	4	T53547DPH	BF	H	5.66	Tim 30000H X	L4IHV	310	482	a	TX	56	8 1/2x2 7/8 x1/2	T
47	16M		139	250	15500	4460	7.50/20D	7.50/20	Her JXEF	6-3 1/2 x4 1/4	245	...	184	93-3400	7-2 1/2 x10	N	WG T9A	4	T 53547DPH	BF	H	** -5.66	Tim 30000HX	L4IHV	310	482	a	TX	60	8 1/2x2 1/2x1/2	T
48	16M2		139	250	15500	4590	7.50/20D	8.25/20D	Her JXEF	6-3 1/2 x4 1/4	245	...	184	93-3400	7-2 1/2 x10	N	WG T9A	4	Tim E300DPH	dF	H	6.13-8.10	Tim 30000HX	L4IHV	310	482	a	TX	60	8 1/2x2 1/2x1/2	T
49	1801T		136	250	17000	5760	8.25/20D	8.25/20	Her JXBF	6-3 9/16 x4 1/4	263	...	192	98-3200	7-2 1/2 x10	N	WG T9A	4	Tim E100DPH	SF	H	** -6.20	Tim 30003H	LT41HV	314	532	a	TX	60	9 1/2x3x1/2	T
50	1802T		136	250	17000	5890	8.25/20D	8.25/20	Her JXBF	6-3 9/16 x4 1/4	263	...	192	98-3200	7-2 1/2 x10	N	WG T9A	4	Tim E300DPH	dF	H	6.13-8.10	Tim 30003H	LT41HV	314	532	a	TX	60	9 1/2x3x1/2	T
51	2501T		136	250	19000	6025	8.25/20D	9.00/20	Her JXCF	6-3 3/4 x4 1/4	282	...	212	103-3200	7-2 1/2 x10	N	WG T97	4	TimH100DPH	SF	R	** -6.80	Tim 3100H	LT41HV	346	583	a	TX	60	9 1/2x3x1/2	T
52	2502T		136	250	19000	6105	8.25/20D	9.00/20	Her JXCF	6-3 3/4 x4 1/4	282	...	212	103-3200	7-2 1/2 x10	N	WG T97	4	TimH300DPH	dF	R	6.13-8.15	Tim 3100H	LT41HV	346	583	a	TX	60	9 1/2x3x1/2	T
53	2901T		136	250	21500	6535	9.00/20D	10.00/20	Her JXDF	6-4x4 1/4	320	...	250	115-3100	7-2 1/2 x10	Y	Cla 205V	5	Tim L100DPH	SF	R	** -6.83	Tim 32514H	LT41HV	466	820	a	TX	60	9 1/2x3x1/2	T
54	2902T		136	250	21500	6695	9.00/20D	10.00/20	Her JXDF	6-4x4 1/4	320	...	250	115-3100	7-2 1/2 x10	Y	Cla 205V	5	Tim L300DPH	dF	R	6.32-8.22	Tim 32514H	LT41HV	466	820	a	TX	60	9 1/2x3x1/2	T
55	2904T		136	250	23500	7260	9.00/20D	10.00/20	Her JXDF	6-4x4 1/4	320	...	250	115-3100	7-2 1/2 x10	Y	Cla 205V	15	Tim Q-100	SF	R	** -6.83	Tim 32514H	LT41HV	466	820	a	TD	76	9 1/2x3x1/2	T
56	3001T		136	250	22000	6575	9.00/20D	10.00/20	Here JXLDF	6-4x4 1/2	339	...	272	131-3200	7-2 1/2 x10	Y	Cla 205V	5	Tim L100DPH	SF	R	** -6.83	Tim 32514H	LT41HV	466	820	a	TX	60	9 1/2x3x1/2	T
57	3002T		136	250	22000	6735	9.00/20D	10.00/20	Here JXLDF	6-4x4 1/2	339	...	272	131-3200	7-2 1/2 x10	Y	Cla 205V	5	Tim L300DPH	dF	R	6.32-8.22	Tim 32514H	LT41HV	466	820	a	TX	60	9 1/2x3x1/2	T
58	3004T		136	250	24000	7300	9.00/20D	10.00/20	Here JXLDF	6-4x4 1/2	339	...	272	131-3200	7-2 1/2 x10	Y	Cla 205V	15	Tim Q-100	SF	R	** -6.83	Tim 32514H	LT41HV	466	820	a	TD	76	9 1/2x3x1/2	T
59	35M		143	203	22500	6925	9.00/20D	10.00/20	Con T6371F	6-4 1/16 x4 5/8	371	...	290	140-3000	7-2 1/4 x13 1/2	Y	Cla 290VO	5	Tim L100DPH	SF	R	**-6.83	Tim 32514H	LT41HV	466	820	a	TX	60 1/2	10 1/2x3 1/4x	T
60	35M2		143	203	22500	7115	9.00/20D	10.00/20	Con T6371F	6-4 1/16 x4 5/8	371	...	290	140-3000	7-2 1/4 x13 1/2	Y	Cla 290VO	5	Tim L300DPH	dF	R	6.32-8.22	Tim 32514H	LT41HV	466	820	a	TX	60 1/2	10 1/2x3 1/4x	T
61	45M		143	203	26000	8005	10.00/20D	10.00/24	Con T6427F*	6-4 1/4 x4 7/8	427	...	347	158-2800	7-2 3/4 x13 1/2	Y	Cla 290VO	5	Tim Q100P	SF	R	** -6.83	Tim FD-900	TW41A	606	933	a	TD	60 1/2	10 1/2x3 1/2x	T
62	45M2		143	203	26000	8380	10.00/20D	10.00/24	Con T6427F*	6-4 1/4 x4 7/8	427	...	347	158-2800	7-2 3/4 x13 1/2	Y	Cla 290VO	5	Tim Q300P	dF	R	6.53-8.53	Tim FD-900	TW41A	606	933	a	TD	60 1/2	10 1/2x3 1/2x	T
63	55M2		143	203	30000	8635	11.00/22D	11.00/24	Con T6427F*	6-4 1/4 x4 7/8	427	...	347	158-2800	7-2 3/4 x13 1/2	Y	Cla 290VO	5	Tim S300P	HyF	R	6.53-8.53	Tim FD-900	Tw41A	722	1051	a	TD	60 1/2	10 1/2x3 1/2x	T
64	55MA		155	203	30000	8765	11.00/22D	11.00/24	Con T6427F*	6-4 1/4 x4 7/8	427	...	347	158-2800	7-2 3/4 x13 1/2	Y	Cla 290V	15	Tim S-200P	2F	R	** -7.08	Tim FD-900	TW41A	722	1051	a	TD	72 1/2	10 1/2x3 1/2x	T
65	60MA		155	203	32000	9600	11.00/22D	11.00/24	Con 22RF*	6-4 1/2 x5 1/4	501	...	385	148-2400	7-2 3/4 x14 1/2	Y	Fu 5A65	15	Tim S200P	2F	R	** -7.08	Tim FD-900	Tw41A	722	1051	a	FX	72 1/2	10 1/2x3 1/2x	T
66	60M2		143	203	32000	9370	11.00/22D	11.00/24	Con 22RF*	6-4 1/2 x5 1/4	501	...	385	148-2400	7-2 3/4 x14 1/2	Y	Fu 5A650	5	Tim S300P	HyF	R	6.53-8.53	Tim FD-900	Tw41A	722	1051	a	TX	60 1/2	10 1/2x3 1/2x	T
67	65M2		141	201	33000	9995	11.00/22D	11.00/24	Con R6602F*	6-4 7/8 x5 5/8	602	...	466	200-2600	7-3 1/4 x14 1/2	Y	Fu 5A650	5	Tim S300P	HyF	R	6.53-8.53	Tim FE-900	Ws41A	722	1051	a	TX	60 1/2	10 1/2x3 1/2x	T
68	65MA		153	201	33000	10225	11.00/22D	11.00/24	Con R6602F*	6-4 7/8 x5 5/8	602	...	466	205-3000	7-3 1/4 x14 1/2	Y	Fu 5A65	15	Tim S200P	HyF	R	** -7.08	Tim FE-900	Ws41A	722	1051	a	TX	72 1/2	10 1/2x3 1/2x	T
	Ford F-1																														
69	Cowl. 9HC-84	930	114	114	4700	2226	6.00/16-4	6.50/16-6S	Own 7HC	6-3.3x4.4	226	6.8	180	95-3300	4-2.87x5.0	N	Own 21C	3	Own 8C	H 1/2	H	3.73-4.27	Own 8C	O4IH	178	259	Co	M2	40.06	5.92x2 1/2x15	T
70	Cowl. 9RC-84	960	114	114	4700	2266	6.00/16-4	6.50/16-6S	Own 8RC	8-3 1/8 x3 3/4	239	6.8	180	100-3800	3-2.49x5.2	N	Own 21C	3	Own 8C	H 1/2	H	3.73-4.27	Own 8C	O4IH	178	259	Co	M2	40.06	5.92x2 1/2x15	T
	F-2																														
71	Cowl. 9HD-84	1045	122	122	5700	2616	6.50/16-6	7.50/16-6S	Own 7HD	6-3.3x4.4	226	6.8	180	95-3300	4-2.87x5.0	N	Own 51Y	4	Own 8D	8F	H	** -4.86	Own 8D	O4IH	167	264	Co	M2	48.06	6x2 1/4x.19	T
72	Cowl. 9RD-84	1075	122	122	5700	2656	6.50/16-6	7.50/16-6S	Own 8RD	8-3 1/8 x3 3/4	239	6.8	180	100-3800	3-2.49x5.2	N	Own 51Y	4	Own 8D	8F	H	** -4.86	Own 8D	O4IH	167	264	Co	M2	48.06	6x2 1/4x.19	T

†—Front only; Rear 10.00/20.
△—Front only; Rear 8.25/20.
▲—Front only; Rear 9.00/20-10.

‡—For wheelbases below 196"—9x3x1/4.
●—Five speed transmission optional.
▼—Overdrive optional.

††—6.8-9.23 for Models YL and Y. 6.53-8.f3 standard on YAL and YA, but 7.27/9.49 ratios are also available on these two models.

●—For shorter wheelbases—10x3 1/2x1/4.
▲—Auxiliary trans. Spicer 6231B, three forward speeds.

§—Auxiliary trans. Spicer 703F, three forward speeds.
*—Diesel engine optional.
:—Radius rods optional.

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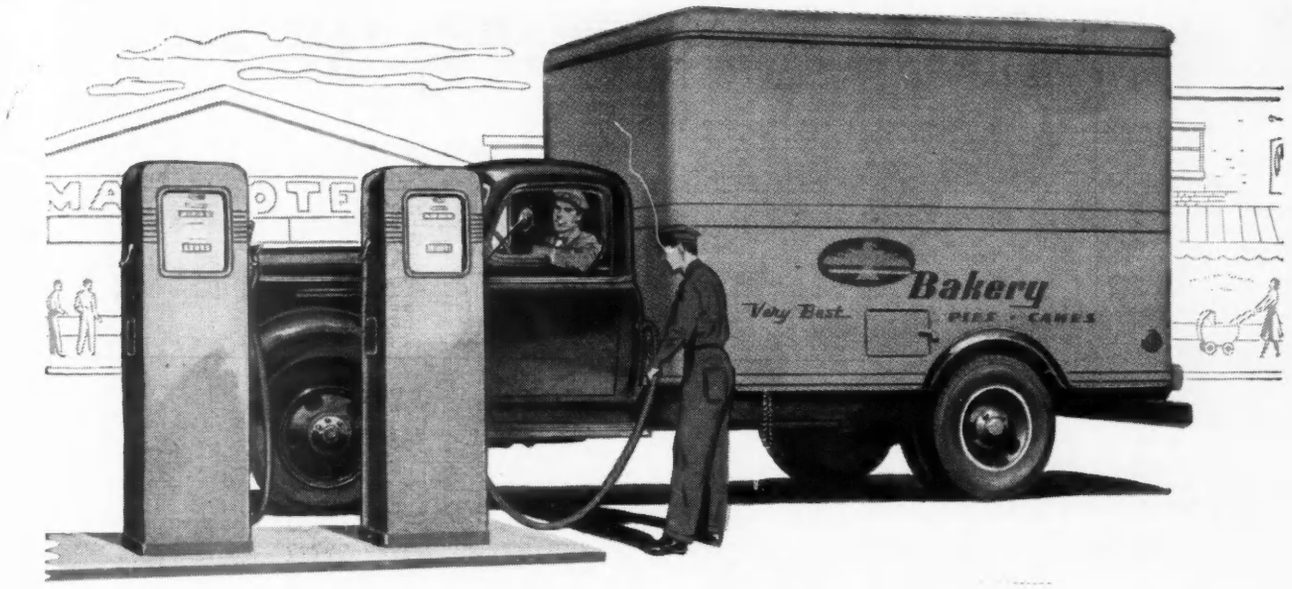
TURN **MORE** DEAD WEIGHT INTO PAYING FREIGHT WITH—

MAGNESIUM



each magnesium truck body saves bakery one cent per mile!

"On a typical 145 mile run, a magnesium truck body saves us 4 gallons of gas," stated a large East Coast bakery with 20 magnesium truck bodies in its fleet. In addition to these easily measured savings, accurate cost records maintained on each truck showed that the use of the significantly lighter magnesium bodies increased tire life and reduced maintenance costs on engines, clutches, and brakes. Overall operating cost records proved that even when hauling light bakery loads, trucks with magnesium bodies cost approximately *one cent a mile less* to operate than those with heavier bodies.

Magnesium is by far the lightest of all structural metals and by its use maximum reduction in costly dead weight can be obtained. Yet for all its lightness magnesium is surprisingly strong. Years of successful service have proved that magnesium truck bodies can stand the roughest use with only routine maintenance.

Whether your loads are light or heavy, it will pay you to investigate magnesium truck bodies.

For more information about magnesium truck bodies or the names of body shops in your vicinity, call the nearest Dow sales office or write direct.

Magnesium Division, Dept. MG-97

THE DOW CHEMICAL COMPANY

MIDLAND, MICHIGAN

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The Lightest Truck Bodies Are Made of Magnesium

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(Continued from Page 84)

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Standard	WHEEL-BASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear Standard Front and Rear	TIRE SIZES Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number	Main Bearings Diameter and Length	Governor Standard	TRANS-MISSION Make and Model	Forward Speeds	REAR AXLE Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE Make and Model	BRAKES SERVICE Make Location Type Operation	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME Side Rail Dimensions	Type
	Ford, Continued																														
	F-3																														
1	Cowl....9HY-84	1120	122	122	6800	2849	7.00/17-6S	7.50/17-8S	Own 7HY	6-3.3x4.4	226	6.8	180	95-3300	4	2.87x5.0	N	Own 51Y	4	Own 8Y	SF	H	** -4.86	Own 8D	O4IH	188	308	Co	M2	48.06	6x2¼x.19	T
2	Cowl....9RY-84	1150	122	122	6800	2889	7.00/17-6S	7.50/17-8S	Own 8RY	8-3⅛x3¼	239	6.8	180	100-3800	3	2.49x5.2	N	Own 51Y	4	Own 8Y	SF	H	** -4.86	Own 8D	O4IH	188	308	Co	M2	48.06	6x2¼x.19	T
	F-3 Parcel Divy.																														
3	w/s.....9HJ	1375	104	104	7800	3030	7.00/16-6	7.50/17-8S	Own 8HJ	6-3.3x4.4	226	6.8	180	95-3300	4	2.87x5.0	N	Own 8J	3	Own 8J	SF	H	** -4.86	Own 8J	O4IH	215	330	C	TX	82●	6x2¼x.19	T
4	w/s.....9H2J	1390	122	122	7800	3100	7.00/16-6	7.50/17-8S	Own 8HJ	6-3.3x4.4	226	6.8	180	95-3300	4	2.87x5.2	N	Own 8J	3	Own 8J	SF	H	** -4.86	Own 8J	O4IH	215	330	C	TX	100●	6x2¼x.19	T
	F-4																														
5	Cowl...9HTL-84	1175	134	134	10000	3457	7.00/20-8S	7.00/18-8	Own 7HT	6-3.3x4.4	226	6.8	180	95-3300	4	2.87x5.0	N	Own 41T	4	Own 8T	SF	H	5.14-5.83	Own 7RTL	O4IH	302	506	Co	TX	60.06	7x2¾x.21	T
6	Cowl...9RTL-84	1205	134	134	10000	3497	7.00/20-8S	7.00/18-8	Own 8RT	8-3⅛x3¼	239	6.8	180	100-3800	3	2.49x5.2	N	Own 41T	4	Own 8T	SF	H	5.14-5.83	Own 7RTL	O4IH	302	506	Co	TX	60.06	7x2¾x.21	T
	F-5																														
7	Cowl....9HT-84	1220	134	134	14000	3646	6.50/20-6	7.50/20-8	Own 7HT	6-3.3x4.4	226	6.8	180	95-3300	4	2.87x5.0	N	Own 41T	4	Own 8T	SF	H	5.14-6.67	Own 7RT	O4IH	302	506	Co	TX	60.06	7x2¾x.21	T
8	Cowl....9RT-84	1250	134	134	14000	3686	6.50/20-6	7.50/20-8	Own 8RT	8-3⅛x3¼	239	6.8	180	100-3800	3	2.49x5.2	N	Own 41T	4	Own 8T	SF	H	5.14-6.67	Own 7RT	O4IH	302	506	Co	TX	60.06	7x2¾x.21	T
9	Cowl...9H8T-84	1250	158	158	14000	3796	6.50/20-6	7.50/20-8	Own 7HT	6-3.3x4.4	226	6.8	180	95-3300	4	2.87x5.0	N	Own 41T	4	Own 8T	SF	H	5.14-6.67	Own 7RT	O4IH	302	506	Co	TX	84.06	7x2¾x.21●	TL
10	Cowl...9R8T-84	1280	158	158	14000	3836	6.50/20-6	7.50/20-8	Own 8RT	8-3⅛x3¼	239	6.8	180	100-3800	3	2.49x5.2	N	Own 41T	4	Own 8T	SF	H	5.14-6.67	Own 7RT	O4IH	302	506	Co	TX	84.06	7-2¾x.21●	TL
11	Cowl...9H6T-84	1370	176	176	14000	3926	6.50/20-6	7.50/20-8	Own 7HT	6-3.3x4.4	226	6.8	180	95-3300	4	2.87x5.0	N	Own 41T	4	Own 8T	SF	H	5.14-6.67	Own 7RT	O4IH	302	506	Co	TX	102.2	7.08x2.79x½●	TL
12	Cowl...9R6T-84	1401	176	176	14000	3966	6.50/20-6	7.50/20-8	Own 8RT	8-3⅛x3¼	239	6.8	180	100-3800	3	2.49x5.2	N	Own 41T	4	Own 8T	SF	H	5.14-6.67	Own 7RT	O4IH	302	506	Co	TX	102.2	7.08x2.79x½●	TL●
	F-5 C.O.E.																														
13	Cab...9HOW-81	1605	110	110	14000	4346	6.50/20-6	7.50/20-8	Own 8HW	6-3.3x4.4	226	6.8	180	95-3300	4	2.87x5.0	N	Own 41T	4	Own 8T	SF	H	5.14-6.67	Own 7RW	O4IH	302	506	Co	TX	60.06	7x2¾x.21●	TL
14	Cab...9ROW-81	1635	110	110	14000	4386	6.50/20-6	7.50/20-8	Own 8RW	8-3⅛x3¼	239	6.8	180	100-3800	3	2.49x5.2	N	Own 41T	4	Own 8T	SF	H	5.14-6.67	Own 7RW	O4IH	302	506	Co	TX	60.06	7x2¾x.21●	TL
15	Cab....9HW-81	1635	134	134	14000	4476	6.50/20-6	7.50/20-8	Own 8HW	6-3.3x4.4	226	6.8	180	95-3300	4	2.87x5.0	N	Own 41T	4	Own 8T	SF	H	5.14-6.67	Own 7RW	O4IH	302	506	Co	TX	84.06	7.08x2.8x½●	TL
16	Cab....9RW-81	1665	134	134	14000	4516	6.50/20-6	7.50/20-8	Own 8RW	8-3⅛x3¼	239	6.8	180	100-3800	3	2.49x5.2	N	Own 41T	4	Own 8T	SF	H	5.14-6.67	Own 7RW	O4IH	302	506	Co	TX	84.06	7.08x2.8x½●	TL
17	Cab....9H8W-81	1665	158	158	14000	4546	6.50/20-6	7.50/20-8	Own 8HW	6-3.3x4.4	226	6.8	180	95-3300	4	2.87x5.0	N	Own 41T	4	Own 8T	SF	H	5.14-6.67	Own 7RW	O4IH	302	506	Co	TX	108.1	7.08x2.8x½●	TL
18	Cab....9R8W-81	1695	158	158	14000	4586	6.50/20-6	7.50/20-8	Own 8RW	8-3⅛x3¼	239	6.8	180	100-3800	3	2.49x5.2	N	Own 41T	4	Own 8T	SF	H	5.14-6.67	Own 7RW	O4IH	302	506	Co	TX	108.1	7.08x2.8x½●	TL
	F-5 School Bus																														
19	Bus Cl..9H8T-84	1315	158	158	12000	3755	6.50/20-6	7.00/20-8	Own 7HT	6-3.3x4.4	226	6.8	180	95-3300	4	2.87x5.0	N	Own 41T	4	Own 8T	SF	H	5.14-6.67	Own 7RTH	O4IH	302	506	Co	TX	128●	7x2¾x.21●	TL
20	Bus Cl..9R8T-84	1345	158	158	12000	3795	6.50/20-6	7.00/20-8	Own 8RT	8-3⅛x3¼	239	6.8	180	100-3800	3	2.49x5.2	N	Own 41T	4	Own 8T	SF	H	5.14-6.67	Own 7RTH	O4IH	302	506	Co	TX	128●	7x2¾x.21●	TL
21	Bus Cl..9H4T-84	1530	194	194	15000	4260	7.50/20-8	8.25/20-10	Own 7HT	6-3.3x4.4	226	6.8	180	95-3300	4	2.87x5.0	N	Own 41T	4	Own 8T	SF	H	5.14-6.67	Own 7RTH	O4IHV	302	506	Co	TX	164●	7.08x2.8x½●	TL
22	Bus Cl..9R4T-84	1560	194	194	15000	4300	7.50/20-8	8.25/20-10	Own 8RT	8-3⅛x3¼	239	6.8	180	100-3800	3	2.49x5.2	N	Own 41T	4	Own 8T	SF	H	5.14-5.67	Own 7RTH	O4IHV	302	506	Co	TX	164●	7.08x2.8x½●	TL
	F-6																														
23	Cowl..9HTH-84	1610	134	134	16000	3980	7.50/20-8	8.25/20-10	Own 7HT	6-3.3x4.4	226	6.8	180	95-3300	4	2.87x5.0	N	Own 41T	4	Own 8TH	Hy	H	6.2 -7.2	Own 7RTH	O4IHV	302	506	Co	TX	60.06	7.08x2.8x½●	TL
24	Cowl..9RTH-84	1640	134	134	16000	4020	7.50/20-8	8.25/20-10	Own 8RT	8-3⅛x3¼	239	6.8	180	100-3800	3	2.49x5.2	N	Own 41T	4	Own 8TH	Hy	H	6.2 -7.2	Own 7RTH	O4IHV	302	506	Co	TX	60.06	7.08x2.8x½●	TL
25	Cowl..9MTH-84	1665	134	134	16000	4165	7.50/20-8	8.25/20-10	Own 8MTH	6-3.5x4.4	254	6.8	212	110-3400	4	2.87x5.0	Y	Own 8MTH	4	Own 8TH	Hy	H	6.2 -7.2	Own 7RTH	O4IHV	302	506	Co	TX	60.06	7.08x2.8x½●	TL
26	Cowl..9H8TH-84	1640	158	158	16000	4050	7.50/20-8	8.25/20-10	Own 7HT	6-3.3x4.4	226	6.8	180	95-3300	4	2.87x5.0	N	Own 41T	4	Own 8TH	Hy	H	6.2 -7.2	Own 7RTH	O4IHV	302	506	Co	TX	84.06	7.08x2.8x½●	TL
27	Cowl..9R8TH-84	1670	158	158	16000	4090	7.50/20-8	8.25/20-10	Own 8RT	8-3⅛x3¼	239	6.8	180	100-3800	3	2.49x5.2	N	Own 41T	4	Own 8TH	Hy	H	6.2 -7.2	Own 7RTH	O4IHV	302	506	Co	TX	84.06	7.08x2.8x½●	TL
28	Cowl.9M8TH-84	1707	158	158	16000	4235	7.50/20-8	8.25/20-10	Own 8MTH	6-3.5x4.4	254	6.8	212	110-3400	4	2.87x5.0	Y	Own 8MTH	4	Own 8TH	Hy	H	6.2 -7.2	Own 7RTH	O4IHV	302	506	Co	TX	84.06	7.08x2.8x½●	TL
29	Cowl.9H6TH-84	1623	176	176	16000	4130	7.50/20-8	8.25/20-10	Own 7HT	6-3.3x4.4	226	6.8	180	95-3300	4	2.87x5.0	N	Own 41T	4	Own 8TH	Hy	H	6.2 -7.2	Own 7RTH	O4IHV	302	506	Co	TX	102.3	7.08x2.8x½●	TL
30	Cowl.9R6TH-84	1655	176	176	16000	4170	7.50/20-8	8.25/20-10	Own 8RT	8-3⅛x3¼	239	6.8	180	100-3800	3	2.49x5.2	N	Own 41T	4	Own 8TH	Hy	H	6.2 -7.2	Own 7RTH	O4IHV	302	506	Co	TX	102.3	7.08x2.8x½●	TL
31	Cowl.9M6TH-84	1748	176	176	16000	4315	7.50/20-8	8.25/20-10	Own 8MTH	6-3.5x4.4	254	6.8	212	110-3400	4	2.87x5.0	Y	Own 8MTH	4	Own 8TH	Hy	H	6.2 -7.2	Own 7RTH	O4IHV	302	506	Co	TX	102.3	7.08x2.8x½●	TL
	F-6 C.O.E.																														
32	Cab.9HOWH-81	1990	110	110	16000	4549	7.50/20-8	8.25/20-10	Own 8HW	6-3.3x4.4	226	6.8	180	95-3300	4	2.87x5.0	N	Own 41T	4	Own 8TH	Hy	H	6.2 -7.2	Own 7RW	O4IHV	302	506	Co	TX	60.06	7x2¾x.21●	TL
33	Cab.9ROWH-81	2020	110	110	16000	4589	7.50/20-8	8.25/20-10	Own 8RW	8-3⅛x3¼	239	6.8	180	100-3800	3	2.49x5.2	N	Own 41T	4	Own 8TH	Hy	H	6.2 -7.2	Own 7RW	O4IHV	302	506	Co	TX	60.06	7x2¾x.21●	TL
34	Cab.9MOWH-81	2059	110	110	16000	4574	7.50/20-8	8.25/20-10	Own 8MWH	6-3.5x4.4	254	6.8	210	106-3400	4	2.87x5.0	Y	Own 8MTH	4	Own 8TH	Hy	H	6.2 -7.2	Own 7RW	O4IHV	302	506	Co	TX	60.06	7x2¾x.21●	TL
35	Cab...9HWH-81	2020	134	134	16000	4679	7.50/20-8	8.25/20-10	Own 8HW	6-3.3x4.4	226	6.8	180	95-3300	4	2.87x5.0	N	Own 41T	4	Own 8TH	Hy	H	6.2 -7.2	Own 7RW	O4IHV	302	506	Co	TX	84.06	7.08x2.8x½●	TL
36	Cab...9RWH-81	2050	134	134	16000	4719	7.50/20-8	8.25/20-10	Own 8RW	8-3⅛x3¼	239	6.8	180	100-3800	3	2.49x5.2	N	Own 41T	4	Own 8TH	Hy	H	6.2 -7.2	Own 7RW	O4IHV	302	506	Co	TX	84.06	7.08x2.8x½●	TL
37	Cab..9MWH-81	2091	134	134	16000	4704	7.50/20-8	8.25/20-10	Own 8MWH	6-3.5x4.4	254	6.8	210	106-3400	4	2.87x5.0	Y	Own 8MTH	4	Own 8TH	Hy	H	6.2 -7.2	Own 7RW	O4IHV	302	506	Co	TX	84.06	7.08x2.8x½●	TL
38	Cab..9H8WH-81	2050	158	158	16000	4749	7.50/20-8	8.25/20-10	Own 8HW	6-3.3x4.4	226	6.8	180	95-3300	4	2.87x5.0	N	Own 41T	4	Own 8TH	Hy	H	6.2 -7.2	Own 7RW	O4IHV	302	506	Co	TX	108.1	7.08x2.8x½●	TL
39	Cab..9R8WH-81	2080	158	158	16000	4789	7.50/20-8	8.25/20-10	Own 8RW	8-3⅛x3¼	239	6.8	180	100-3800	3	2.49x5.2	N	Own 41T	4	Own 8TH	Hy	H	6.2 -7.2	Own 7RW	O4IHV	302	506	Co	TX	108.1	7.08x2.8x½●	TL
40	Cab..9M8WH-81	2122	158	158	16000	4774	7.50/20-8	8.25/20-10	Own 8MWH	6-3.5x4.4	254	6.8	210	106-3400	4	2.87x5.0	Y	Own 8MTH	4	Own 8TH	Hy	H	6.2 -7.2	Own 7RW	O4IHV	302	506	Co	TX	108.1	7.08x2.8x½●	TL
	F-7																														
41	Cowl....9EQ-84	2685	135	135	19000	5478	8.25/20-10	9.00/20-10	Own 8EQ	8-3½x4½	337	6.4	255	145-3600	3	2.87x5.2	Y	Own 7EQ	5	Own 8Q	Hy	H	** -6.8	Own 7EQ	O4IHV	444	697	Co	TX	61.06	9x3x.25†	T
42	Cowl....9E7Q-84	2861	147	147	19000	5528	8.25/20-10	9.00/20-10	Own 8EQ	8-3½x4½	337	6.4	255	145-3600	3	2.87x5.2	Y	Own 7EQ	5	Own 8Q	Hy	H	** -6.8	Own 7EQ	O4IHV	444	697	Co	TX	73.06	9x3x.25†	T
43	Cowl....9E9Q-84	2735	159	159	19000	5648	8.25/20-10	9.00/20-10	Own 8EQ	8-3½x4½	337	6.4	255	145-3600	3	2.87x5.2	Y	Own 7EQ	5	Own 8Q	Hy	H	** -6.8	Own 7EQ	O4IHV	444	697	Co	TX	85.06	9x3x.25†	T
44	Cowl....9E8Q-84	2913	178	178	19000	5748	8.25/20-10	9.00/20-10	Own 8EQ	8-3½x4½	337	6.4	255	145-3600	3	2.87x5.2	Y	Own 7EQ	5	Own 8Q	Hy	H	** -6.8	Own 7EQ	O4IHV	444	697	Co	TX	104.1	9x3x.25†	T
45	Cowl....9E5Q-84	2785	195	195	19000	5808	8.25/20-10	9.00/20-10	Own 8EQ	8-3½x4½	337	6.4	255	145-3600	3	2.87x5.2	Y	Own 7EQ	5	Own 8Q	Hy	H	** -6.8	Own 7EQ	O4IHV	444	697	Co	TX	121.1	9x3x.25†	T
	F-8																														
46	Cowl..9EQH-84	3155	135	135	22000	5934	9.00/20-10	10.0/20-12	Own 8EQ	8-3½x4½	337	6.4	255	145-3600	3	2.87x5.2	Y	Own 7EQH	5	Own 8QH	SF	H	** -7.17	Own 7EQ	O4IHV	471	729	C	TX	61.06	9x3x.25†	T
47	Cowl..9E7QH-84	3352	147	147	22000	5984	9.00/20-10	10.0/20-12	Own 8EQ	8-3½x4½	337	6.4	255	145-3600	3	2.87x5.2	Y	Own 7EQH	5	Own 8QH	SF	H	** -7.17	Own 7EQ	O4IHV■	471	729	C	TX	73.06	9x3x.25†	T
48	Cowl..9E9QH-84	3205	159	159	22000	6224	9.00/20-10	10.0/20-12	Own 8EQ	8-3½x4½	337	6.4	255	145-3600	3	2.87x5.2	Y	Own 7EQH	5	Own 8QH	SF	H	** -7.17	Own 7EQ	O4IHV■	471	729	C	TX	85.06	9x3x.25†	T
49	Cowl..9E8QH-84	3404	178	178	22000	6124	9.00/20-10	10.0/20-12	Own 8EQ	8-3½x4½	337	6.4	255	145-3600	3	2.87x5.2	Y	Own 7EQH	5	Own 8QH	SF	H	** -7.17	Own 7EQ	O4IHV■	471	729	C	TX	104.1	9x3x.25†	T
50	Cowl..9E5QH-84	3255	195	195	22000	6284	9.00/20-10	10.0/20-12	Own 8EQ	8-3½x4½	337	6.4	255	145-3600	3	2.87x5.2	Y	Own 7EQH	5	Own 8QH	SF	H	** -7.17	Own 7EQ	O4IHV■	471	729	C	TX	121.1	9x3x.25†	T
	Freightliner																														
51	(c.o.e.).....B-42	.....	112	120	34000	▲11200	10.00/22	.....	Cum HRB	6-5½x6	743	13½	540	165-1800	7	4½x16½	Y	Fu 4A86	8	Eat 22501	SFd	H	4.33-6.67	Tim 27061	O4IA	645	1050	a	TD	72	10⅝x3¼x¼	DL
52	Kenworth(D)..521	.....	165	255	28000	12000	10.00/20	11.00/22	Cum HB6	6-4⅛x6	672	17	500	150-1800	7	4½x16	Y	BL 8241	4	Tim U200P	H2F	H	5.91-9.76	TimFe900DPA	Ws4IA	722	1174	a	TD	74	9½x3¼x⅜	C
53	585	.....	165	255	28000	9600	10.00/20	11.00/22	Wau 140GZ	6-4⅛x5½	554	6.4	450	188-2600	7	3x13	Y	Fu 5C650	5	Tim R100P	HF	H	5.29-7.40	TimFe900DPA	Ws4IA	648	1168	a	TD	64	9½x3¼x⅜	C
54	Linn.....A-15	.....	120	....	9000	6000	7.50/20S	8.25/20S	Her JXE3	6-3½x4¼	245	6.5	184	91-3200	7	2½x10	Y	WGT9	4	Own 601	N	N	None	Tim F30B28H	L4IH	306	478	a	T	.....	None	....
55	.....A-25	.....	156	....	11200	6200	7.50/20S	8.25/20	Her JXE3	6-3½x4¼	245	6.5	184	91-3200	7	2½x10	Y	WGT9	4	Own 601	N	N	None	Tim F30B28H	L4IH	306	478	a	X	.....	None	....
56	.....A-35	.....	169	....	14700	7900	7.50/20D	8.25/20	Her JXC	6-3¾x4¼	282	6.7	207	103-3200	7	2½x10	Y	WGT9	4	Own 602T	N	N	None	Tim F35	L6IH	486	744	a	X	.....	None	....
57	.....A-45	.....	205	....	16900	8100	7.50/20D	8.25/20	Her JXC	6-3¾x4¼	282	6.7	207	103-3200	7	2½x10	Y	WGT9	4	Own 602T	N	N	None	Tim F35	L6IH	486	744	a	X	.....	None	....
58	Mar. Her...DVL-4	.....	90	118	‡6750	.....	7.50/16S	8.25/18S	Willys MB	4-3½x4½	134	6.4	105	60-4000	3	2.33x5.48	Y	Own	3	(Front Drive)	.....		7.10	Own	4IH	202	327	M2	.....	.....	None	....
59	Peterbilt(D)...280	.....	175	Opt	35000	12500	10.00/20D	11.00/22	Cum HB600	6-4⅛x6	672	17	500	150-1800	7	4½x16½	Y	Spl 8041	12	U-200P	2F	R	** -6.42	TimFe900DPA	Ws4IA	738	1052	...	TD	86½	10⅛x3½x⅜	CT

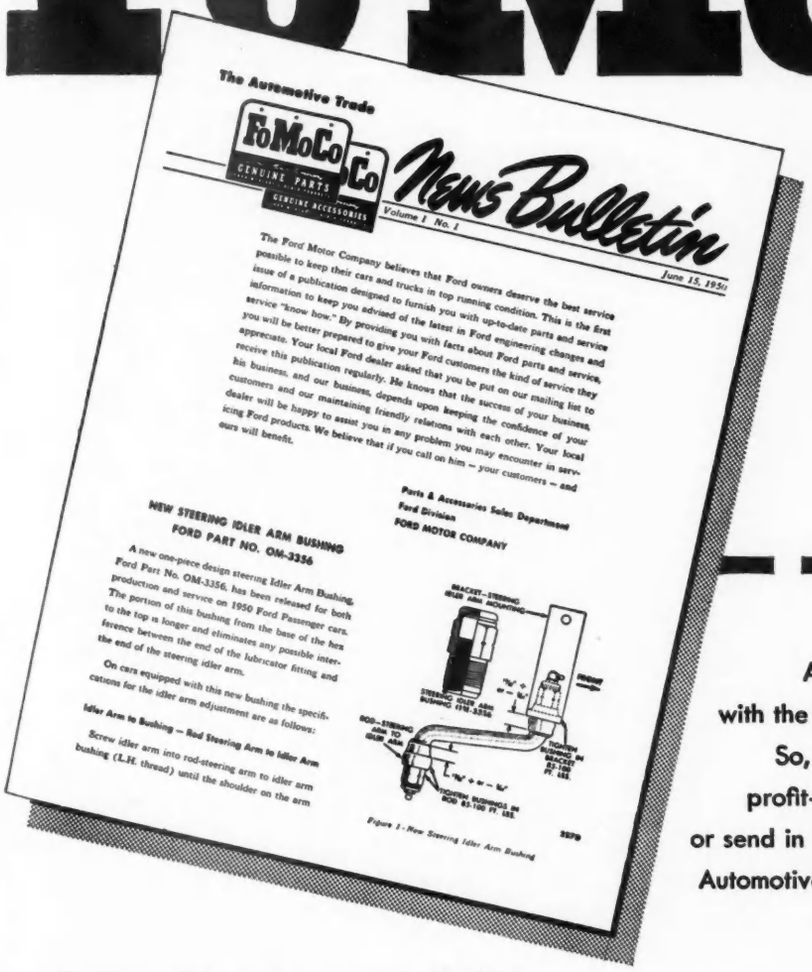
▲—Includes cab. ♦—Cowl to axle.
■—Air brake equipment optional on F-8, Front 16x2¼, Rear 16½x5½.
‡—8200 for 8.25/18 tires.

●—Reinforcement 6.58x2.21x.125 extended to include front spring rear brackets and rear spring front bracket.
†—Reinforcement 8.5x2.56x.15 starts at front spring rear brackets and ends behind rear spring front brackets.

(Turn to Page 88, Please)

Independent Garagemen...

Here's YOUR NEW FoMoCo News Bulletin!



The Automotive Trade

FoMoCo Co — GENUINE PARTS — GENUINE ACCESSORIES

News Bulletin

Volume 1 No. 1

June 15, 1950

The Ford Motor Company believes that Ford owners deserve the best service possible to keep their cars and trucks in top running condition. This is the first issue of a publication designed to furnish you with up-to-date parts and service information to keep you advised of the latest in Ford engineering changes and service "know how." By providing you with facts about Ford parts and service, you will be better prepared to give your Ford customers the kind of service they appreciate. Your local Ford dealer asked that you be put on our mailing list to receive this publication regularly. He knows that the success of your business, his business, and our business, depends upon keeping the confidence of your customers and our maintaining friendly relations with each other. Your local dealer will be happy to assist you in any problem you may encounter in servicing Ford products. We believe that if you call on him — your customers — and ours will benefit.

Parts & Accessories Sales Department
Ford Division
FORD MOTOR COMPANY

NEW STEERING IDLER ARM BUSHING
FORD PART NO. OM-3356

A new one-piece design steering Idler Arm Bushing, Ford Part No. OM-3356, has been released for both production and service on 1950 Ford Passenger cars. The portion of this bushing from the base of the hex to the top is longer and eliminates any possible interference between the end of the lubricator fitting and the end of the steering idler arm.

On cars equipped with this new bushing the specifications for the idler arm adjustment are as follows:

Idler Arm to Bushing — Rod Steering Arm to Idler Arm

Screw idler arm into rod-steering arm to idler arm bushing (L.H. thread) until the shoulder on the arm

Figure 1—New Steering Idler Arm Bushing

3570

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(Continued from Page 86)

Line Number	MAKE AND MODEL	Chassis List Price	WHEELBASE Minimum Standard	WHEELBASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear: Standard Front and Rear	TIRE SIZES: Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings: Number Diameter and Length	Governor Standard	TRANSMISSION: Make and Model	TRANSMISSION: Forward Speeds	REAR AXLE: Make and Model	REAR AXLE: Gear and Type	REAR AXLE: Drive & Torque	REAR AXLE: Gear Ratio Range in High	FRONT AXLE: Make and Model	BRAKES SERVICE: Make Location Type Operation	BRAKES SERVICE: Lining Area	BRAKES SERVICE: Drum Area	BRAKES SERVICE: Drum Material	BRAKES: Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME: Side Rail Dimensions	FRAME: Type
1	Reo E-19X		125	125	8000	4400▲	7.00/20S	8.25/20S	Own 245	6–3½x4¼	245	6.2	192	89–3100	7–2½x10.7	N	WG T9	4	Tim 53547	SF	H	4.57–6.16	Tim 30000	LT4IH	310	482	var	TX	60⅝	8¼x2¾x⅜	T
2	E-19A		125	125	16000	4950▲	6.50/20	8.25/20	Own 245	6–3½x4¼	245	6.2	192	89–3100	7–2½x10.7	N	WG T9	4	Tim 53547	HF	H	5.28–6.8	Tim 30000●	LT4IVH	310	482	var	TX	60⅝	8¼x2¾x⅜	T
3	E-19T		125	125	16000	5410▲	6.50/20	8.25/20	Own 245	6–3½x4¼	245	6.2	192	89–3100	7–2½x10.7	N	WG T9	4	Tim 53547	HFd	H	6.13–8.10	Tim 30000●	LT4IVH	310	482	var	TX	60⅝	8¼x2¾x⅜	T
4	E-19B		150	150	16000	5035▲	6.50/20	8.25/20	Own 245	6–3½x4¼	245	6.2	192	89–3100	7–2½x10.7	N	WG T9	4	Tim 53547	HF	H	5.28–6.8	Tim 30000	LT4IVH	310	482	var	TX	85⅝	8¼x2¾x⅜	T
5	E-19C		170	170	16000	5120▲	6.50/20	8.25/20	Own 245	6–3½x4¼	245	6.2	192	89–3100	7–2½x10.7	N	WG T9	4	Tim 53547	HF	H	5.28–6.8	Tim 30000	LT4IHV	310	482	var	TX	100⅝	8¼x2¾x⅜	Tf
6	E-19L		187½	187½	16000	5250▲	6.50/20	8.25/20	Own 245	6–3½x4¼	245	6.2	192	89–3100	7–2½x10.7	N	WG T9	4	Tim 53547	HF	H	5.28–6.8	Tim 30000	LT4IVH	310	482	var	TX	123⅜	9x3x¼	T
7	E-20A		125	125	16000	5275▲	8.25/20	8.25/20	Own 255	6–3⅜x4½	255	6.7	189	107–3100	7–2x9.408	Y	WG T97	4	Tim E300	HF	H	6.13–8.10	Tim 30000	LT4IVH	340	482	var	TX	60⅝	8¼x2¾x⅜	T
8	E-20T		125	125	16000	5735▲	8.25/20	8.25/20	Own 255	6–3⅜x4½	255	6.7	189	107–3100	7–2x9.408	Y	WG T97	4	Tim E300	HF	H	6.13–8.10	Tim 30000	LT4IVH	340	482	var	TX	60⅝	8¼x2¾x⅜	T
9	E-20B		150	150	16000	5400▲	8.25/20	8.25/20	Own 255	6–3⅜x4½	255	6.7	189	107–3100	7–2x9.408	Y	WG T97	4	Tim E100♦	HF	H	5.28–6.8	Tim 30000	LT4IVH	340	482	var	TX	85⅝	8¼x2¾x⅜	T
10	E-20C		170	170	16000	5535▲	8.25/20	8.25/20	Own 255	6–3⅜x4½	255	6.7	189	107–3400	7–2x9.408	Y	WG T97	4	Tim E100♦	HF	H	5.28–6.8	Tim 30000	LT4IVH	340	482	var	TX	105⅝	9x3x¼	Tf
11	E-20L		187	187	16000	5650▲	8.25/20	8.25/20	Own 255	6–3½x4½	255	6.7	189	107–3400	7–2x9.408	Y	WG T97	4	Tim E100♦	HF	H	5.28–6.8	Tim 30000	LT4IVH	340	482	var	TX	123⅜	9x3x¼	T
12	E-21A		125	125	16500	5315▲	8.25/20	8.25/20	Own 292♦	6–3⅞x4⅛	292	6.5	224	124–3300	7–2x9.408	Y	WG T97	4	Tim E100♦	HF	H	5.28–6.8	Tim 30000	LT4IVH	340	482	var	TX	60⅝	8¼x2¾x⅜	T
13	E-21B		150	150	16500	5440▲	8.25/20	8.25/20	Own 292♦	6–3⅞x4⅛	292	6.5	224	124–3300	7–2x9.408	Y	WG T97	4	Tim E100♦	HF	H	5.28–6.8	Tim 30000	LT4IVH	340	482	var	TX	85⅝	9x3x¼	T
14	E-21C		170	170	16500	5575▲	8.25/20	8.25/20	Own 292♦	6–3⅞x4⅛	292	6.5	224	124–3300	7–2x9.408	Y	WG T97	4	Tim E100♦	HF	H	5.28–6.8	Tim 30000	LT4IVH	340	482	var	TX	105⅝	9x3x¼	T
15	E-21L		185	185	16500	5690▲	8.25/20	8.25/20	Own 292♦	6–3⅞x4⅛	292	6.5	224	124–3300	7–2x9.408	Y	WG T97	4	Tim E100♦	HF	H	5.28–6.8	Tim 30000	LT4IVH	340	482	var	TX	120⅝	9x3x¼	Tf
16	E-21RA		130	130	19000	6165▲	9.00/20	9.00/20	Own 292♦	6–3⅞x4⅛	292	6.5	224	124–3300	7–2x9.408	Y	Cla T97	4	Tim E100♦	HF	H	5.28–6.8	Tim 30000	LT4IVH	370	640	var	TX	65⅝	9x3x¼	T
17	E-21RT		130	130	19000	6740▲	9.00/20	9.00/20	Own 292♦	6–3⅞x4⅛	292	6.5	224	124–3300	7–2x9.408	Y	Cla 205V	5	Tim H100△	HF	H	5.28–6.8	Tim 31104	LT4IVH	370	640	var	TX	65⅝	9x3x¼	T
18	E-21RT		150	150	19000	6330▲	9.00/20	9.00/20	Own 292♦	6–3⅞x4⅛	292	6.5	224	124–3300	7–2x9.408	Y	Cla 205V	5	Tim H100△	HF	H	5.28–6.8	Tim 31104	LT4IVH	370	640	var	TX	85⅝	9x3x¼	T
19	E-21RC		170	170	19000	6465▲	9.00/20	9.00/20	Own 292♦	6–3⅞x4⅛	292	6.5	224	124–3300	7–2x9.408	Y	Cla 205V	5	Tim H100△	HF	H	5.28–6.8	Tim 31104	LT4IVH	370	640	var	TX	105⅝	9x3x¼	Tf
20	E-21RL		185	185	19000	6600▲	9.00/20	9.00/20	Own 292♦	6–3⅞x4⅛	292	6.5	224	124–3300	7–2x9.408	Y	Cla 205V	5	Tim H100△	HF	H	5.28–6.8	Tim 31104	LT4IVH	370	640	var	TX	120⅝	9¼x3⅞x⅜	Tf
21	E-22A		130	130	20000	6165▲	9.00/20	9.00/20	Own 331♦	6–4¼x4½	331	6.4	264	140–3200	7–2x9.408	Y	Cla 205V	5	Tim H100△	HF	H	5.28–6.8	Tim 31104	LT4IVH	370	640	var	TX	65⅝	9x3x¼	T
22	E-22T		130	130	20000	6740▲	9.00/20	9.00/20	Own 331♦	6–4¼x4½	331	6.4	264	140–3200	7–2x9.408	Y	Cla 205V	5	Tim H300	HFd	H	6.67–8.85	Tim 31104	LT4IVH	370	640	var	TX	65⅝	9x3x¼	T
23	E-22B		150	150	20000	6330▲	9.00/20	9.00/20	Own 331♦	6–4¼x4½	331	6.4	264	140–3200	7–2x9.408	Y	Cla 205V	5	Tim H100△	HF	H	5.28–6.8	Tim 31104	LT4IVH	370	640	var	TX	85⅝	9x3x¼	T
24	E-22C		170	170	20000	6465▲	9.00/20	9.00/20	Own 331♦	6–4¼x4½	331	6.4	264	140–3200	7–2x9.408	Y	Cla 205V	5	Tim H100△	HF	H	5.28–6.8	Tim 31104	LT4IVH	370	640	var	TX	105⅝	9x3x¼	Tf
25	E-22L		185	185	20000	6600▲	9.00/20	9.00/20	Own 331♦	6–4¼x4½	331	6.4	264	140–3200	7–2x9.408	Y	Cla 205V	5	Tim H100△	HF	H	5.28–6.8	Tim 31104	LT4IVH	370	640	var	TX	120⅝	9¼x3⅞x⅜	Tf
26	E-22RA		130	130	22000	6705▲	10.00/20	10.00/20	Own 331♦	6–4¼x4½	331	6.4	264	140–3200	7–2x9.408	Y	Cla 205V	5	Tim L100△	HF	H	6.16–7.4	Tim 32500	LT4IVH	422	644	var	TX	65⅝	9x3x¼	T
27	E-22RT		130	130	22000	7205▲	10.00/20	10.00/20	Own 331♦	6–4¼x4½	331	6.4	264	140–3200	7–2x9.408	Y	Cla 205V	5	Tim L300△	HFd	H	6.32–8.22	Tim 32500	LT4IVH	422	644	var	TX	65⅝	9x3x¼	T
28	E-22RB		150	150	22000	6910▲	10.00/20	10.00/20	Own 331♦	6–4¼x4½	331	6.4	264	140–3200	7–2x9.408	Y	Cla 205V	5	Tim L100△	HF	H	6.16–7.4	Tim 32500	LT4IVH	422	644	var	TX	85⅝	9x3x¼	T
29	E-22RC		170	170	22000	7100▲	10.00/20	10.00/20	Own 331♦	6–4¼x4½	331	6.4	264	140–3200	7–2x9.408	Y	Cla 205V	5	Tim L100△	HF	H	6.16–7.4	Tim 32500	LT4IVH	422	644	var	TX	105⅝	9x3x¼	Tf
30	E-22RL		185	185	22000	7260▲	10.00/20	10.00/20	Own 331♦	6–4¼x4½	331	6.4	264	140–3200	7–2x9.408	Y	Cla 205V	5	Tim L100△	HF	H	6.16–7.4	Tim 32500	LT4IVH	422	644	var	TX	120⅝	9¼x3⅞x⅜	Tf
31	E-22SA		130	130	24000	7630▲	10.00/20	11.00/20	Own 331♦	6–4¼x4½	331	6.4	264	140–3200	7–2x9.408	Y	Cla 290V	5	Tim Q100△	HF	H	5.28–7.8	Tim 35000	TWs4IA	638	934	var	TX	65⅝	9¼x3⅞x⅜	T
32	E-22ST		130	130	24000	8090▲	10.00/20	11.00/20	Own 331♦	6–4¼x4½	331	6.4	264	140–3200	7–2x9.408	Y	Cla 290V	5	Tim Q300△	HFd	H	6.53–8.53	Tim 35000	TWs4IA	638	934	var	TX	65⅝	9¼x3⅞x⅜	T
33	E-22SB		150	150	24000	7810▲	10.00/20	11.00/20	Own 331♦	6–4¼x4½	331	6.4	264	140–3200	7–2x9.408	Y	Cla 290V	5	Tim Q100△	HF	H	5.28–7.8	Tim 35000	TWs4IA	638	934	var	TX	85⅝	9¼x3⅞x⅜	T
34	E-22SC		170	170	24000	7995▲	10.00/20	11.00/20	Own 331♦	6–4¼x4½	331	6.4	264	140–3200	7–2x9.408	Y	Cla 290V	5	Tim Q100△	HF	H	5.28–7.8	Tim 35000	TWs4IA	638	934	var	TX	105⅝	9¼x3⅞x⅜	Tf
35	E-22SL		185	185	24000	8150▲	10.00/20	11.00/20	Own 331♦	6–4¼x4½	331	6.4	264	140–3200	7–2x9.408	Y	Cla 290V	5	Tim Q100△	HF	H	5.28–7.8	Tim 35000	TWs4IA	638	934	var	TX	120⅝	9¼x3⅞x⅜	Tf
36	E-23SA		130	130	24000	7190▲	9.00/20	10.00/20	Con T6371	6–4¼x4⅝	371	5.8	294	126–2600	7–2½x13.6	Y	Cla 270V	5	Tim L100△	HF	H	6.16–7.4	Tim 32500	LT4IVH	422	644	var	TX	65⅝	9¼x3⅞x⅜	T
37	E-23ST		130	130	24000	7490▲	9.00/20	10.00/20	Con T6371	6–4¼x4⅝	371	5.8	294	126–2600	7–2½x13.6	Y	Cla 270V	5	Tim L100△	HF	H	6.16–7.4	Tim 32500	LT4IVH	422	644	var	TX	65⅝	9¼x3⅞x⅜	T
38	E-23SB		150	150	24000	7335▲	9.00/20	10.00/20	Con T6371	6–4¼x4⅝	371	5.8	294	126–2600	7–2½x13.6	Y	Cla 270V	5	Tim L100△	HF	H	6.16–7.4	Tim 32500	LT4IVH	422	644	var	TX	85⅝	9¼x3⅞x⅜	T
39	E-23SC		170	170	24000	7505▲	9.00/20	10.00/20	Con T6371	6–4¼x4⅝	371	5.8	294	126–2600	7–2½x13.6	Y	Cla 270V	5	Tim L100△	HF	H	6.16–7.4	Tim 32500	LT4IVH	422	644	var	TX	105⅝	9¼x3⅞x⅜	Tf
40	E-23SL		185	185	24000	7650▲	9.00/20	10.00/20	Con T6371	6–4¼x4⅝	371	5.8	294	126–2600	7–2½x13.6	Y	Cla 270V	5	Tim L100△	HF	H	6.16–7.4	Tim 32500	LT4IVH	422	644	var	TX	120⅝	9¼x3⅞x⅜	Tf
41	E-23A		130	130	24000	7630▲	10.00/20	10.00/20	Con T6427	6–4⅜x4¾	427	5.9	338	145–2600	7–2½x13.6	Y	Cla 270V	5	Tim L100△	HF	H	6.16–7.4	Tim 32500	TWs4IA	514	644	var	TX	65⅝	9¼x3⅞x⅜	T
42	E-23T		130	130	24000	8120▲	10.00/20	10.00/20	Con T6427	6–4⅜x4¾	427	5.9	338	145–2600	7–2½x13.6	Y	Cla 270V	5	Tim L100△	HF	H	6.16–7.4	Tim 32500	TWs4IA	514	644	var	TX	65⅝	9¼x3⅞x⅜	T
43	E-23B		150	150	24000	7790▲	10.00/20	10.00/20	Con T6427	6–4⅜x4¾	427	5.9	338	145–2600	7–2½x13.6	Y	Cla 270V	5	Tim L100△	HF	H	6.16–7.4	Tim 32500	TWs4IA	514	644	var	TX	85⅝	9¼x3⅞x⅜	T
44	E-23C		170	170	24000	7950▲	10.00/20	10.00/20	Con T6427	6–4⅜x4¾	427	5.9	338	145–2600	7–2½x13.6	Y	Cla 270V	5	Tim L100△	HF	H	6.16–7.4	Tim 32500	TWs4IA	514	644	var	TX	105⅝	9¼x3⅞x⅜	Tf
45	E-23L		185	185	24000	8090▲	10.00/20	10.00/20	Con T6427	6–4⅜x4¾	427	5.9	338	145–2600	7–2½x13.6	Y	Cla 270V	5	Tim L100△	HF	H	6.16–7.4	Tim 32500	TWs4IA	514	644	var	TX	120⅝	9¼x3⅞x⅜	Tf
46	E-23RA		130	130	26000	8020▲	10.00/20	11.00/20	Con T6427	6–4⅜x4¾	427	5.9	338	145–2600	7–2½x13.6	Y	Cla 270V	5	Tim Q100△	HF	H	5.28–7.8	Tim FD900	TWs4IA	620	928	var	TX	65⅝	9¼x3⅞x⅜	T
47	E-23RT		130	130	26000	8480▲	10.00/20	11.00/20	Con T6427	6–4⅜x4¾	427	5.9	338	145–2600	7–2½x13.6	Y	Cla 270V	5	Tim Q100△	HF	H	5.28–7.8	Tim FD900	TWs4IA	620	928	var	TX	65⅝	9¼x3⅞x⅜	T
48	E-23RB		150	150	26000	8175▲	10.00/20	11.00/20	Con T6427	6–4⅜x4¾	427	5.9	338	145–2600	7–2½x13.6	Y	Cla 270V	5	Tim Q100△	HF	H	5.28–7.8	Tim FD900	TWs4IA	620	928	var	TX	85⅝	9¼x3⅞x⅜	T
49	E-23RC		170	170	26000	8360▲	10.00/20	11.00/20	Con T6427	6–4⅜x4¾	427	5.9	338	145–2600	7–2½x13.6	Y	Cla 270V	5	Tim Q100△	HF	H	5.28–7.8	Tim FD900	TWs4IA	620	928	var	TX	105⅝	9¼x3⅞x⅜	Tf
50	E-23RL		185	185	26000	8520▲	10.00/20	11.00/20	Con T6427	6–4⅜x4¾	427	5.9	338	145–2600	7–2½x13.6	Y	Cla 270V	5	Tim Q100△	HF	H	5.28–7.8	Tim FD900	TWs4IA	620	928	var	TX	120⅝	9¼x3⅞x⅜	Tf
51	30A		145	145	32000	11280▲	11.00/20	11.00/24	Con R6513	6–4½x5⅝	513	5.8	392	167–2600	7–3¼x14.7	Y	Spl 6252A	5	Tim S300△	HFd	H	6.42–8.38	Tim 36000	TWs4IA	722	1038	var	TI	67½	10½x3¼x⅝	T
52	30B		165	165	32000	11360▲	11.00/20	11.00/24	Con R6513	6–4½x5⅝	513	5.8	392	167–2600	7–3¼x14.7	Y	Spl 6252A	5	Tim U200△	HFd	H	7.08	Tim 36000	TWs4IA	722	1038	var	TI	87½	10½x3¼x⅝	T
53	31A		145	145	32000	11280▲	11.00/20	11.00/24	Con R6602	6–4⅞x5⅝	602	5.8	456	194–2600	7–3¼x14.7	Y	Spl 6252A	5	Tim S300△	HFd	H	6.42–8.38	Tim 36000	TWs4IA	722	1038	var	TI	67½	10½x3¼x⅝	T
54	31B		165	165	32000	11360▲	11.00/20	11.00/24	Con R6602	6–4⅞x5⅝	602	5.8	456	194–2600	7–3¼x14.7	Y	Spl 6252A	5	Tim U200△	HFd	H	7.08	Tim 36000	TWs4IA	722	1038	var	TI	87½	10½x3¼x⅝	T
55	Sterling HD97		148	175	24000	9150	9.00/20	11.00/20	Wau 6MZA	6–4¼x4¾	404	5.6	290	130–3000	7–2½x12½	Y	Fu 5A43	5	Tim Q100DPH	FHy	R	5.29–7.80	Tim 35011H	T4IHV	524	926	A	TX	67	9x7x¼	A
56	HD105		148	175	24000	9550	10.00/20	11.00/22	Wau 6MZA	6–4¼x4¾	404	5.6	290	130–3000	7–2½x12½	Y	Fu 5A43	5	Tim R100DPH	FHy	R	5.29–7.40	Tim 35011H	T4IHV	524	926	A	TX	67	9x3¼x¼	A
57	HD115		148	175	32000	10650	10.00/20	11.00/24	Wau 6SRKR	6–4⅝x5½	517	5.5	368	125–2250	7–3x13¾	Y	Fu 5A62	5	Tim S200P	2F	R	6.42–9.83	Tim 36000TW	Ws4IA	722	1054	A	TX	67	9x3¼x¼	A
58	HD145		148	175	36000	11250	11.00/20	12.00/24	Wau 6SRKR	6–4⅝x5½	517	5.5	368	125–2250	7–3x13¾	Y	Fu 5A62	5	Tim 70721W	2F	R	7.69–11.36	Tim 36000TW	Ws4IA	670	1118	A	TX	67	9¼x3⅝x⅝	A
59	(D) HD115H		158	185	32000	11950	10.00/20	11.00/24	Cum HB600	6–4½x6	672	17	500	150–1800	7–4½x16½	Y	Fu 4B86	4	Tim S200P	2F	R	6.42–9.83	Tim 36000TW	Ws4IA	722	1054	A	TX	68	9x3¼x¼	A
60	(D) HD145H		158	185	36000	12550	11.00/20	12.00/24	Cum HB600	6–4½x6	672	17	500	150–1800	7–4½x16½	Y	Fu 4B86	4	Tim 79721W	2F	R	7.69–11.36	Tim 36000TW	Ws4IA	670	1118	A	TX	68	9¼x3⅝x⅝	A
61	HC97		148	175	24000	9200	9.00/20	11.00/20	Wau 6MZA	6–4¼x4¾	404	5.6	290	130–3000	7–2½x12½	Y	Fu 5A43	5	Own 97H	CD	R	6.70–10.82	Tim 35011H	T4IHV	518	852	A	TX	67	9x7x¼	A
62	HC105		148	175	28000	9700	10.00/20	11.00/22	Wau 6MZA	6–4¼x4¾	404	5.6	290	130–3000	7–2½x12½	Y	Fu 5A43‖	15	Own 137H	CD	R	6.70–10.82	Tim 35011H	TL4IHV	540	842	A	TX	67	9x3¼x¼	A
63	HC115		148	175	32000	10350	10.00/20	11.00/24	Wau 6SRKR	6–4⅝x5½	517	5.5	368	125–2250	7–3x13¾	Y	Fu 5A62‖	15	Own 137W	CD	R	6.70–10.82	Tim 36000TW	Ws4IA	648	1064	A	TX	67	9¼x3¼x¼	A
64	HC144		148	175	36000	11250	10.00/22	12.00/24	Wau 6SRKR	6–4⅝x5½	517	5.5	368	125–2250	7–3x13¾	Y	Fu 5A62‖	15	Own 148W	CD	R	6.70–10.82	Tim 36000TW	Ws4IA	708	1102	A	TX	67	9¼x3⅝x⅝	A
65	HC147		148	175	36000	11500	10.00/22	12.00/24	Wau 6SRKR	6–4⅝x5½	517	5.5	368	125–2250	7–3x13¾	Y	Fu 5A62‖	15	Own 147W	CD	R	6.70–10.82	Tim 36000TW	Ws4IA	708	1102	A	TX	67	9¼x3⅝x⅝	A
66	HC175		167	185	45000	14600	12.00/24‡	14.00/24‡	Wau 145GK	6–5¼x6	779	6.2	585	186–2100	7–3½x17¾	Y	Fu 4B86●	12	Own 175W	CD	R	7.31–12.42	Tim 27454W	Ws4IA	786	1212	A	TX	77	9¼x3⅝x⅝	A
67	HC250		178	190	60000	18400	14.00/24‡	14.00/24‡	Wau 145GK	6–5¼x6	779	6.2	585	186–2100	7–3½x17¾	Y	Fu 4B86●	12	Own 251W	CD	R	7.31–12.42	Tim 27454W	Ws4IA	786	1212	A	JX	95	12x3½x⅜	AL
68	(D) HC115H		167	185	32000	12250	10.00/20	11.00/24	Cum HB600	6–4½x6	672	17	500	150–1800	7–4½x16½	Y	Fu 4B86●	12	Own 137W	CD	R	6.70–10.82	Tim 36000TW	Ws4IA	648	1064	A	TX	77	9x3¼x¼	A
69	(D) HC175H		167	185	45000	14930	12.00/24†	14.00/24‡	Cum HBD600	6–4½x6	672	17	500	150–1800	7–4½x16½	Y	Fu 4B86●	12	Own 175W	CD	R	7.31–12.42	Tim 27454W	Ws4IA	786	1212	A	TX	77	9¼x3⅝x⅝	A
70	(D) HC250H		178	190	60000	18700	14.00/24‡	14.00/24‡	Cum HBD600	6–4½x6	672	17	500	150–1800	7–4½x16½	Y	Fu 4B86●	12	Own 251W	CD	R	7.31–12.42	Tim 27454W	Ws4IA	786	1212	A	JX	95	12x3½x⅜	AL
71	Studebaker 2R5	1022	112	112	4600	2125	6.00/16S	6.50/16S	Own 1R	6–3x4	170	7.0	138	85–4000	4–2⅛x5⅛	N	Own 673519	3	Own 679817	Hy	H	**–4.82	Own 678860	Wg4IH	170	276	CO	2I	40	7x2¼x¼	T
72	2R10	1088	122	122	6100	2400	6.50/16S	7.50/16S	Own 1R	6–3x4	170	7.0	138	85–4000	4–2⅛x5⅛	N	Own 673519	3	Own 679819	SF	H	5.57–4.86	Own 678860	Wg4IH	198	314	CO	2I	50	7¼x2⅛x⅜	T
73	2R15–21	1236	121	121	7800	3005	7.00/17S	7.00/20	Own 2R	6–3x4	170	7.0	138	85–4000	4–2⅛x5⅛	N	Own 676044	4	Own 677768	SF	H	5.83–6.66	Own 677091	LH4IH	226	342	Ce	TX	50¼	8x2⅜x⅜	T
74	2R15–31	1255	131	131	10000	3065	7.00/17S	7.00/20	Own 2R	6–3x4	170	7.0	138	85–4000	4–2⅛x5⅛	N	Own 676044	4	Own 677768	SF	H	5.83–6.66	Own 677091	LH4IH	226	342	Ce	TX	60¼	8¼x2¼x⅜	T
	2R16	1291	131	195	14000	3695	6.50/20D	8.25/20	Own 3R	6–3⅛x4⅜	226	6.5	174	94–3400	4–2½x5½	N	Own 676045	4	Own 675732††	SF	H	6.66–5.66	Own 674484	LH4IH	294	442	Ce	TX	60¼	8½x2¾x⅝	T

▲—Includes Cab.
♦—Two speed axle available.
§ Auxiliary Transmission Own OJ.

‡ Rear only; Front 12.00/24.
‖ Auxiliary transmission Own FJ.
††—Two speed 6.13–8.10 optional.

●—Model 288 engine can be furnished.
●—Model 310 engine can be furnished.

△—Double reduction and 2-speed available.
† Rear only; Front 11.00/24.

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(Continued from Page 88)

Line Number	MAKE AND MODEL	Chassis List Price	WHEELBASE Minimum Standard	WHEELBASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear: Standard Front and Rear	TIRE SIZES: Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings: Number Diameter and Length	Governor Standard	TRANSMISSION: Make and Model	Forward Speeds	REAR AXLE: Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE: Make and Model	BRAKES SERVICE: Make Location Type Operation	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME: Side Rail Dimensions	Type
	Studebaker, Cont.																														
1	.....2R16A	1326	131	195	14000	3695	6.50/20 D	8.25/20	Own 4R	6–3 7/8 x 4 1/4	245	7.0	205	102–3200	4–2 1/16 x 5	N	Own 678790	4	Own 675732♦	SF	H	6.66–5.83	Own 674484	LH4IH	294	442	Ce	TX	60 1/8	8 1/16 x 2 1/2 x 3/16	T
2	.....2R16B	1326	131	195	15000	3695	6.50/20D	8.25/20	Own 4R	6–3 7/8 x 4 1/4	245	7.0	205	102–3200	4–2 1/16 x 5	N	Own 678790	4	Own 675732♦	SF	H	6.66–5.83	Own 674484	LH4IH	294	442	Ce	TX	60 1/8	8 1/16 x 2 1/2 x 3/16	T
3	.....2R17	1592	131	195	16000	4180	7.50/20D	8.25/20	Own 3R	6–3 7/8 x 4 1/4	226	6.5	174	94–3400	4–2 1/16 x 5 ‡	Y	Own 676045	4	Own 675571 ♦♦	Hy	H	6.80– . .	Own 674484	LH4IH	367	553	Ce	TX	60 1/8	8 1/16 x 2 1/2 x 3/16	P
4	.....2R17A	1627	131	195	16000	4180	7.50/20 D	9.00/20	Own 4B	6–3 7/8 x 4 1/4	245	7.0	205	102–3200	4–2 1/16 x 5	N	Own 678794	4	Own 675571 ♦♦	Hy	H	6.80–6.20	Own 674484	LH4IH	367	553	Ce	TX	60 1/8	8 1/16 x 2 1/2 x 3/16	P
5	.....2R17B	1627	131	195	17000	4180	7.50/20D	9.00/20	Own 4R	6–3 7/8 x 4 1/4	245	7.0	205	102–3200	4–2 1/16 x 5	N	Own 678794	4	Own 675571 ♦♦	Hy	H	6.80–6.20	Own 674484	LH4IH	367	553	Ce	TX	60 1/8	8 1/16 x 2 1/2 x 3/16	P
6	Ward La Fr. . .D-1		149	220	25000	▲ 9500	10.00/20	11.00/20	Con T6427	6–4 1/8 x 4 1/4	427	5.1	340	152–2600	7–2 1/16 x 13 1/2	Y	Ful 5A430	5	Tim Q-100	B	R	**–6.83	Tim 35017TW	Ws4A	600	928	C	TM	68 1/4	9 1/16 x 3 x 1/4	T
7	.....D-1C		149	220	29000	▲ 9500	11.00/20	11.00/22	Con T6427	6–4 1/8 x 4 1/4	427	5.1	340	152–2600	7–2 1/16 x 13 1/2	Y	Ful 5A430	5	Tim S-200	S2	R	**–7.08	Tim 35017TW	Ws4A	673	1031	C	TM	68 1/4	9 1/16 x 3 x 1/4	T
8	.....D-2K		149	220	29000	▲10000	11.00/20	11.00/22	Wau 140GK	6–4 1/8 x 5 1/2	525	6.4	425	168–2400	7–2 3/8 x 13 ‡	Y	Ful 5A620	5	Tim S-200	S2	R	**–7.84	Tim 35017TW	Ws4A	673	1031	C	TM	68 1/4	10x3 1/2 x 1/4	T
9	.....D-2Z		149	220	29000	▲10000	11.00/20	11.00/20	Wau 140GZ	6–4 3/8 x 5 1/2	554	6.4	456	184–2400	7–3 1/4 x 13 1/2	Y	Ful 5C650	5	Tim S-200	S2	R	**–7.84	Tim 35017TW	Ws4A	673	1031	C	TM	68 1/4	10x3 1/2 x 1/4	T
10	.....D-3		149	220	29000	▲10000	11.00/20	11.00/22	Con R6572	6–4 3/4 x 5 3/4	572	5.9	440	189–2600	7–3 1/4 x 14 1/2	Y	Ful 5C650	5	Tim S-200	S2	R	**–7.84	Tim 35017TW	Ws4B	673	1031	C	TM	68 1/4	10x3 1/2 x 1/4	T
11	.....D-3S		149	220	29000	▲10000	11.00/20	11.00/22	Con R6602	6–4 3/4 x 5 3/4	602	5.9	463	198–2600	7–3 1/4 x 14 1/2	Y	Ful 5C650	5	Tim S-200	S2	R	**–7.84	Tim 35017TW	Ws4B	673	1031	C	TM	68 1/4	10x3 1/2 x 1/4	T
12	(D).....D-5		149	220	35000	▲12500	11.00/22	11.00/22	Cum HB600	6–4 1/2 x 6	672	17	500	150–1800	7–4 1/2 x 16 3/4	Y	Ful 5C650	5	Tim U-200	S2	R	**–6.42	Tim 27463	Ws4B	681	1041	C	TM	68 1/4	10x3 1/2 x 1/4	T
13	Willys Pan. Del. 473	*1295	104	104	4000	*2620	6.50/15S	. . . .	Own 473	4–3 1/16 x 4 3/16	134	7.4	114	72–4000	3–2.33x5.48	N	WG T96	3	Spi 23–1	Hy ‡	H	4.88–5.38	Own I Tr	B4IH	133	220	a	2I	. . . .	5x2 1/4 x .063	TfD
14	Willys.....HT	*1220	118	118	4250	*2722	6.00/16S	6.50/16S	Own 473	4–3 1/16 x 4 3/16	134	7.4	114	72–4000	3–2.33x5.48	N	WG T96	3	Spi 41	Hy ‡	H	** –5.38	Cla F-154	B4IH	176	276	a	2I	42.28	5 1/16 x 2 x 1/8	TD
	Four-Wheel-Drive																														
15	Coleman G-55		136	150	30000	11750	11.00/20	12.00/20	Buda LO-525	6–4 1/16 x 5 1/16	525	6.7	400	150–2200	7–3x7 1/4	Y	Fu 5A650	5	OW-C375FXa	. . . . .	. . . .	9.66	OW	TW IA	598	9214	. . .	FD	96	9x3x 1/16	C
16	Corbitt. . .G101F20		Opt	. . . .	20000	. . . . .	8.25/20	9.00/20	Con M6330	6–4x4 1/16	330	6.1	248	104–2800	7–2 1/16 x 12	Y	Cla 205VO	5	Tim H100	HF	H	** –6.8	Tim F35	LT4IHV	420	654	a	TX	Opt	8x3 1/16 x 1/4	T
17	.....G301F24		Opt	. . . .	24000	. . . . .	9.00/20	10.00/20	Con B6371	6–4 1/16 x 5 1/16	371	6.0	280	100–2600	7–2 1/16 x 13 1/2	Y	Fu 5A43	5	Tim R2090	2F	H	** –8.43	Tim F2090	LT4IHV	520	788	a	TD	Opt	9x2 3/16 x 1/4	T
18	.....G601F31		Opt	. . . .	3200′	. . . . .	10.00/20	11.00/24	Con R6513	6–4 1/16 x 5 3/16	513	5.9	400	170–2600	7–3 1/4 x 14 1/2	Y	Fu 5A620	5	Tim 1357	2F	H	6.65–7.33	Tim F3110	Ws4IA	644	984	a	TD	Opt	10 1/16 x 3 1/4 x 1/4	TL
19	(T)(D) DS8U32		Opt	. . . .	32000	. . . . .	10.00/20	11.00/24	Cum HRBB600	6–5 1/16 x 6	743	17.5	540	175–2000	7–4 1/16 x 16 1/2	Y	Fu 5C720	5	Tim 1758	2F	H	** –7.33	Tim F3100	Ws4IA	644	984	a	TD	Opt	10 1/16 x 3 1/4 x 1/4	TL
20	Dodge B-2-PW		. . . .	126	126	8700	. . . . .	7.50/16S	9.00/16-8	Own T-137	6–3 1/16 x 4 1/16	230	6.7	186	94–3200	4–2 1/16 x 4.8	Y	NP-88790	4	Own T-137	HyF	H	4.89–5.83	Own T-137	O4IH	210	311	Co	TX	52 ‡‡	‡‡ x 2 x 6 1/16	C
21	FWD. . . . . .LD		124	184	. . . . .	▲5500	6.50/20D	9.00/20	HerCB-QXLD3	6–3 1/16 x 4 1/4	236	6.7	190	97–3200	7–2 1/16 x 10 1/8	Y	WG T9A	8	Tim F30	SF	H	** –6.67	Tim 53547	T4IHV	342	518	a	T4	60	8x3x ‡	T
22	.....HA		132	168	. . . . .	▲7470	8.25/20D	10.00/20	Wau BZ	6–4 1/4 1/4	320	5.9	237	105–3000	7–2 1/16 x 10 1/4	Y	Own H	5	Own H	SF	H	6.6 –9.01	Own H	L4IHV	391	807	a	T4	79 1/2	9x3x 1/4	T
23	.....HR		132	168	. . . . .	▲8000	9.00/20	10.00/20	Wau MZA	6–4 1/4 x 4 1/8	404	5.6	291	129–2800	7–2 1/16 x 12 1/2	Y	Own H	5	Own H	SF	H	6.6 –9.01	Own H	L4IHV	391	807	a	T4	79 1/2	9x3x 1/4	T
24	.....HG		154	154	. . . . .	▲8050	9.00/20	10.00/20	Wau MZA	6–4 1/4 x 4 3/8	404	5.6	291	129–2800	7–2 1/16 x 12 1/2	Y	Own H	5	Own H	SF	H	6.6 –9.01	Own H	L4IHV	391	807	a	T4	89 1/4	7 1/8 x 3x ‡‡	C
25	.....HRC		139	163	. . . . .	▲9500	10.00/20D	11.00/20	Wau 140GKB	6–4 1/16 x 5 1/2	525	6.4	425	172–2600	7–3 1/4 x 13 ‡‡	Y	Own HRC	10	Own HRC	SF	H	5.4 –9.0	Own HRC	Wg4IHA	419	611	a	T4	74 1/2	9x3x 1/4	T
26	.....HRY		144	168	. . . . .	▲8400	10.00/20D	11.00/20	Wau MZA	6–4 1/4 x 4 3/8	404	5.6	291	129–2800	7–2 1/16 x 12 1/2	Y	Own HRY	5	Own HRY	SF	H	6.6 –9.0	Own HRY	L4IHV	473	836	a	T4	79 1/2	9x3x 1/4	T
27	.....SU		150	182	. . . . .	▲10570	11.00/20D	12.00/20	Wau 8RKR	6–4 3/16 x 5 1/4	517	5.5	369	126–2250	7–3x13 7/8	Y	Own U	5	Own U	BF	H	6.7 –9.8	Own U	L4IHV	512	985	a	T4	90	8 1/8 x 3x ‡‡	C
28	.....YU		150	182	. . . . .	▲11570	11.00/20D	12.00/20	Wau 140GK	6–4 1/16 x 5 1/2	525	6.1	425	142–2250	7–3 1/4 x 13 ‡‡	Y	Own S	5	Own YU	SF	H	5.7–10.8	Own YU	Wg4IHV	539	804	a	T4	90	8 1/8 x 3x ‡‡	C
29	.....ZU		150	182	. . . . .	▲12540	11.00/20D	12.00/20	Wau 140GZ	6–4 3/16 x 5 1/2	554	6.4	460	188–2600	7–3 1/4 x 13 ‡‡	Y	Own S	5	Own ZU	SF	H	6.6–11.4	Own ZU	Wg4IHA	640	1106	a	T4	90	10 1/8 x 3x ‡‡	C
30	.....M7G		150	180	. . . . .	▲15500	12.00/20D	12.00/24	Wau 145GK	6–5 1/16 x 6	779	6.2	590	186–2000	7–3 1/16 x 17 3/16	Y	Own M	10	Tim 1758W	2F	H	5.9 –8.8	Wis F409W	WW4IA	644	1090	a	T4	90	10 1/8 x 3x ‡‡	C
31	(D).....M7D		150	180	. . . . .	▲16100	12.00/20D	12.00/24	Bu DC844	6–5 1/16 x 6 1/16	844	. . .	605	180–1800	7–3 1/4 x 17	Y	Own M	10	Tim 1758W	2F	H	5.9 –8.8	Wis F409W	WW4IA	644	1090	a	T4	90	10 1/8 x 3x ‡‡	C
32	.....M10G		150	180	. . . . .	▲15800	11.00/24D	12.00/24	Wau 145GK	6–5 1/16 x 6	779	6.2	590	186–2000	7–3 1/16 x 17 3/16	Y	Own M	10	Tim 79721W	2F	H	6.7 –9.2	WisF408CWX1	WW4IA	693	1144	a	T4	90	10 1/8 x 3x ‡‡	C
33	(D) M10D		150	180	. . . . .	▲16400	11.00/24D	12.00/24	Bu DC844	6–5 1/16 x 6 1/16	844	. . .	605	180–1800	7–3 1/4 x 17	Y	Own M	10	Tim 79721W	2F	H	6.7 –9.2	WisF408CWX1	WW4IA	693	1144	a	T4	90	10 1/8 x 3x ‡‡	C
34	Marmon-MH440-4		158	170	24000	▲9800	9.00/20D	10.00/20	Her WXLC3	6–4 1/16 x 4 1/16	404	5.4	293	118–2800	7–2 1/16 x 13 1/16	Y	Fu	5	Own	2B	H	** –8.43	Own	W . . . . A	584	887	e	F	72	9 ‡‡ x 3x 1/16	T
35	Herr. . .MH-RC 4		161	. . . .	26000	▲10550	9.00/20	10.00/20	Her RXC	6–4 1/16 x 5 1/16	529	6.3	390	131–2200	7–3x13 1/16	Y	Fu	5	Own	2B	H	** –8.43	Own	W . . . . A	584	887	e	F	72	9 ‡‡ x 3x 1/16	T
36	.....MH555-4		161	173	30000	▲11550	10.00/20D	11.00/20	Her RXC	6–4 1/16 x 5 1/16	529	6.3	390	131–2200	7–3x13 1/16	Y	Fu	5	Own	2B	H	** –8.15	Own	W . . . . A	696	1039	e	F	72	10 1/8 x 3x 1/8	T
37	.....MH-RH 4		161	. . . .	33000	▲11980	10.00/20	11.00/20	Her RXLDH	6–4 3/16 x 5 1/16	558	6.1	440	180–2600	7–3x13 1/16	Y	Fu	5	Own	2B	H	** –8.15	Own	W . . . . A	696	1039	e	F	72	10 1/8 x 3x 1/8	T
38	(C). R5-4		134	134	15500	▲5100	7.50/20D	7.50/20	Ford	8–3 1/8 x 3 3/16	239	6.4	180	100–3800	3–2 1/16 x 4.71	N	Ford	4	Ford	S	H	** –6.67	Own	F . . . . H	303	563	a	F	60 1/8	7x2 3/16 x 1/8	T
39	(C). R6-4		158	158	15500	▲5331	7.50/20D	7.50/20	Ford	8–3 1/8 x 3 3/16	239	6.4	180	100–3800	3–2 1/16 x 4.71	N	Ford	4	Ford	S	H	** –6.67	Own	F . . . . H	303	563	a	F	84 1/8	7x2 3/16 x 1/8	T
40	(C). LD7-4		114	. . . .	5300	▲3500	15′	15′	Ford	8–3 1/8 x 3 3/16	239	6.4	180	100–3800	3–2 1/16 x 4.71	N	Ford	4	Ford	S	H	** –4.27	Own	F . . . . H	162	259	A	F	40 1/8	5 ‡‡ x 2 1/4 x 1/8	T
41	(C). R3-4		122	. . . .	6800	▲4100	7.50/17	7.50/17	Ford	8–3 1/8 x 3 3/16	239	6.4	180	100–3800	3–2 1/16 x 4.71	N	Ford	4	Ford	S	H	** –4.86	Own	F . . . . H	186	308	A	F	48	6x2 1/4 x 1/8	T
42	(C). R4-4		134	. . . .	10000	▲4900	7.00/208	7.00/20	Ford	8–3 1/8 x 3 3/16	239	6.4	180	100–3800	3–2 1/16 x 4.71	N	Ford	4	Ford	S	H	** –5.33	Own	F . . . . H	303	563	A	F	60 1/8	7x2 3/16 x 1/8	T
43	(C) . R5-A-COE4		110	158	15500	▲5360	7.50/20D	7.50/20	Ford	8–3 1/8 x 3 3/16	239	6.4	180	100–3800	3–2 1/16 x 4.71	N	Ford	4	Ford	S	H	** –6.67	Own	F . . . . H	303	563	A	F	60 1/8	7.08x2.8x 1/16	T
44	(C). V5-4		134	176	17000	▲5294	7.50/20D	8.25/20	Ford	8–3 1/8 x 3 3/16	239	6.4	180	100–3800	3–2 1/16 x 4.71	N	Ford	4	Ford	H	H	** –6.80	Own	F . . . . H	302	506	A	F	60	7.08x2.79x 1/16	T
45	(C). Q5-4		136	. . . .	21500	▲7100	9.00/20	10.00/20	Ford	8–3 1/16 x 4 1/8	337	6.4	255	145–3600	3–2 1/16 x 5.21	Y	Ford	5	Ford	H	H	** –6.80	Own	F . . . . H	444	697	A	F	61	9x3x 1/4	T
46	(C). Q6-4		160	. . . .	21500	▲7200	9.00/20	10.00/20	Ford	8–3 1/16 x 4 1/8	337	6.4	255	145–3600	3–2 1/16 x 5.21	Y	Ford	5	Ford	H	H	** –6.80	Own	F . . . . H	444	697	A	F	73	9x3x 1/4	T
47	(C). Q7-4		196	. . . .	21500	▲7350	9.00/20	10.00/20	Ford	8–3 1/16 x 4 1/8	337	6.4	255	145–3600	3–2 1/16 x 5.21	Y	Ford	5	Ford	H	H	** –6.80	Own	F . . . . H	444	697	A	F	85	9x3x 1/4	T
48	(C). Q5-L4		148	. . . .	21500	▲7150	9.00/20	10.00/20	Ford	8–3 1/16 x 4 1/8	337	6.4	255	145–3600	3–2 1/16 x 5.21	Y	Ford	5	Ford	H	H	** –6.80	Own	F . . . . H	444	697	A	F	104	8x3x 1/4	T
49	(C). Q6-L4		179	. . . .	21500	▲7275	9.00/20	10.00/20	Ford	8–3 1/16 x 4 1/8	337	6.4	255	145–3600	3–2 1/16 x 5.21	Y	Ford	5	Ford	H	H	** –6.80	Own	F . . . . H	444	697	A	F	121	9x3x 1/4	T
50	Oshkosh W-212		144	159	21000	▲ 8430	9.00/20D	9.00/20	Her JXLD	6–4x4 1/4	339	. . .	272	130–3000	7–2 1/16 x 10 ‡‡	Y	Fu 5A43	5	Own W212	SF	H	** –7.2	Own W212	W4IHDV	401	665	Co	PX	82	8x3x 1/4	Tf
51	.....W-312		140	205	25000	▲10000	10.00/20D	11.00/20	Her WXLCO3	6–4 1/16 x 4 1/16	404	. . .	312	139–2600	7–2 1/16 x 13 1/16	Y	Fu 5A43	5	Own W312	SF	H	** –6.8	Own W312	W4IHDV	510	876	G	PX	82	8 1/4 x 3 x 5/16	TF
52	.....W1700		150	205	28000	▲11000	11.00/20D	12.00/208	Her RXC	6–4 1/16 x 5 1/16	529	. . .	395	131–2200	7–3x13 1/16	Y	Fu 5A620	5	Own W1700	SF	H	** –6.4	Own 1700	W4IHDV	570	980	G	PX	82	8 1/4 x 3 x 5/16	TF
53	.....W-700		150	205	30000	▲12000	11.00/20D	12.00/20	Her RXCO	6–4 1/16 x 5 1/16	529	. . .	395	131–2200	7–3x12 1/16	Y	Fu 5A650	10	Own W700	2F	H	** –6.8	Own W700	L4IHV	630	975	G	PX	82	10 1/16 x 3 x 3/16	TF
54	(D). . . .W-703D		150	205	30000	▲12700	11.00/20D	12.00/20	Her DRXC	6–4 1/16 x 5 1/16	529	. . .	398	147–2200	7–3 1/16 x 13 1/16	Y	Fu 5A650	10	Own W700	2F	H	** –6.8	Own W700	L4IHV	630	975	G	PX	82	10 1/16 x 3 x 3/16	TF
55	.....W-703		150	205	30000	▲12200	11.00/20D	12.00/20	Her RXLD	6–4 3/16 x 5 1/16	558	. . .	430	150–2200	7–3 1/16 x 13 1/16	Y	Fu 5A650	10	Own W700	2F	H	** –6.8	Own W700	L4IHV	630	975	G	PX	82	10 1/16 x 3 x 3/16	TF
56	.....W-705		150	205	30000	▲12200	11.00/20D	12.00/20	Her RXLD	6–4 3/16 x 5 1/16	558	. . .	430	150–2200	7–3 1/16 x 13 1/16	Y	Fu 5A650	10	Own W700	2F	H	** –6.8	Own W700	L4IHV	630	975	G	PX	82	10 1/16 x 3 x 3/16	TF
57	.....W-712		150	205	34000	▲12600	11.00/20D	12.00/20	Her RXLDH	6–4 3/16 x 5 1/16	558	. . .	462	190–2600	7–3 1/16 x 13 1/16	Y	Fu 5A650	5	Own W712	2F	H	** –6.8	Own W712	L4IHV	630	975	G	PX	82	10 1/16 x 3 x 3/16	TF
58	(D) W-906		158	181	38000	▲15600	12.00/20D	14.00/208	Cum HB600	6–4 1/16 x 6	672	. . .	500	150–1800	7–4 1/16 x 16	Y	Fu 4A86	12	Own W906	2F	H	** –6.2	Own W906	LT4IA	645	975	G	PX	90	10 1/16 x 3 1/16 x 1/4	TF
59	(D) W906R		158	181	39000	▲15700	12.00/20D	14.00/208	Cum HRB-600	6–5 1/16 x 6	743	. . .	540	165–1800	7–4 1/16 x 16	Y	Eu 4A86	12	Own W906R	2F	H	** –6.2	Own W906R	LT4IA	645	975	G	PX	90	10 1/16 x 3 1/16 x 1/4	TF
60	.....W2200		160	181	40000	▲16500	13.00/20D	14.00/208	Bu MO779	6–5 1/16 x 6	779	. . .	575	188–2100	7–3 1/16 x 17	Y	Fu 4A86	12	Own W2200	2F	H	** –6.15	Own 2200	LT4IA	645	975	G	PX	90	10 1/16 x 3 1/16 x 5/16	TF
61	.....W2201		160	181	40000	▲16500	13.00/20D	14.00/208	Bu MO893	6–5 1/16 x 6	893	. . .	670	200–1800	7–3 1/16 x 17	Y	Fu 4A86	12	Own W2201	2F	H	** –6.15	Own 2201	LT4IA	645	975	G	PX	90	10 1/16 x 3 1/16 x 5/16	TF
62	(D) W2204		160	181	46000	▲18500	13.00/20D	14.00/208	Bu 6DC841	6–5 1/16 x 6 1/16	844	. . .	605	180–1800	7–3 1/16 x 17	Y	Fu 4A86	12	Own W2204	2F	H	** –6.4	Own 2204	LT4IA	780	1190	G	PX	90	10 1/16 x 3 1/16 x 5/16	TF
63	(D) W2205		160	181	54000	▲19500	13.00/24D	14.00/24	Bu 6DCS844	6–5 1/16 x 6 1/16	844	. . .	740	240–2100	7–3 1/16 x 17	Y	Fu5A920	10	Own W2205	2F	H	** –6.3	Own W2205	LT4IA	780	1190	G	PX	90	10 1/16 x 3 1/16 x 5/16	LF
64	.....W2206		160	181	54000	▲19000	13.00/24D	14.00/24	H8 400	6–5 1/16 x 7	■	. . .	930	295–2000	7–3 1/16 x 14 1/16	Y	Fu5A1120	10	Own W2206	2F	H	** –6.3	Own W2206	LT4IA	780	1190	G	PX	90	10 1/16 x 3 1/16 x 5/16	LF
65	(D) W2208		160	181	46000	▲17700	13.00/20D	14.00/208	Cum NHB-600	6–5 1/16 x 6	743	. . .	535	200–2100	7–4 1/16 x 16 1/2	Y	Fu 4A86	12	Own W2208	2F	H	** –6.4	Own W2208	LT4IA	780	1190	G	PX	90	10 1/16 x 3 1/16 x 5/16	TF
66	(D) W2209		160	181	54000	▲19500	13.00/24D	14.00/24	Cum NHR8600	6–5 1/16 x 6	743	. . .	800	300–2100	7–4 1/16 x 16 1/2	Y	Fu 5A1120	10	Own W2209	2F	H	** –6.30	Own W2209	LT4IA	780	1190	G	PX	90	10 1/16 x 3 1/16 x 5/16	LF

(Turn to Page 92, Please)

▲ Includes cab.
♦♦—Two speed 6.13–8.10 optional.
♦—Two speed 6.13–8.10 and H.D. 6.20 or 6.30 optional.
•—Complete vehicle with pick-up type body.
■—1091 cu. in.

Sparky Sez

If every broken or worn part on your vehicles had to be replaced by a new one, repairs that today take minutes or hours would take days and weeks. Welding, of course, is the answer.

A great number of welding electrodes are produced these days. One problem is to select the right rods for welding the various kinds of steel used in truck construction. For example, in welding of higher carbon steels—with or without alloys—the area next to the weld and the weld metal is air-hardening . . . that is, it becomes harder and more brittle after heating by welding. Most welds in maintenance and repair welding cannot be heat treated, so they must be serviceable "as welded". Cracking must be avoided. For these cases, the stainless steel electrodes Type 308, or Type 309 are recommended. Welds made with these rods do not harden because of sudden cooling, and they remain tough and strong. In general, forgings, springs, axles or shafts, frames, and other high-carbon steel parts are safely welded with stainless steel.

There's a lot of useful information packed in Marquette's GUIDE TO BETTER WELDING. Write for a copy today.

Marquette welding equipment came through with another spectacular record of performance behind the scenes at the 34th annual 500-mile auto race at Indianapolis. During the preparation for the big race, Marquette welding engineers did vital jobs on every one of the cars entered—a total of 625 welds!

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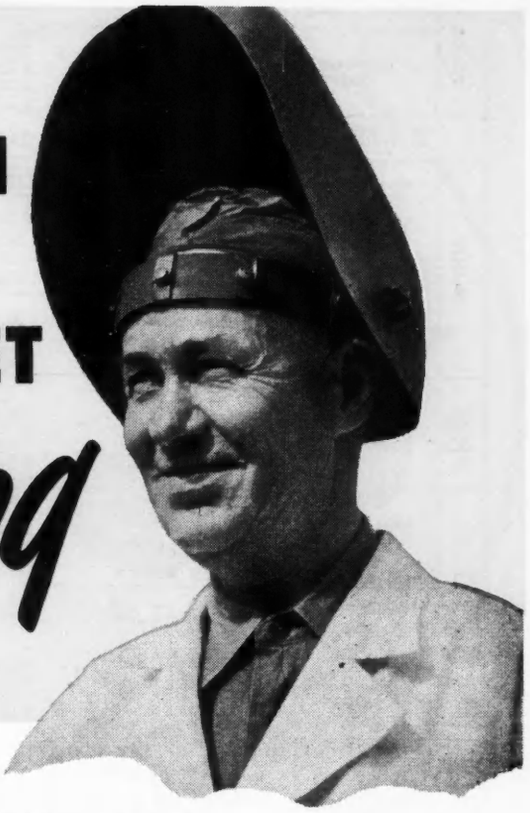

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Model 72

Cut down lost time. With the new, improved Marquette Instant-Arc A-C Welder your crew can make money-saving repairs in a hurry. Variable voltage control, and a wide choice of amperage stages quickly provide the right heat for every welding job. The "Instant Arc" striking characteristics, and the stability of the arc in operation assure smooth, even, efficient welding. Compact, completely self-contained, mounted on sturdy Oilite-bearing wheels, the new welder is *easy* to use. Write today for ALL the facts about this new money-*earning* welder.

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A•C WELDER

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(Continued from Page 90)

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Standard	WHEEL-BASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear Standard Front and Rear	TIRE SIZES Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number Diameter and Length	Governor Standard	TRANSMISSION Make and Model	Forward Speeds	REAR AXLE Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE Make and Model	BRAKES SERVICE Make Location Type Operation	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME Side Rail Dimensions	Type
1	Sterling....DD115	.....	160	178	32000	11500	10.00/20	11.00/24	Wau 6SRKR	6-4⅛x5½	517	5.5	368	125–2250	7-3x13⅛	Y	Fu 5A62♦	10	Tim 1357W	2F	H	6.52–8.6	Tim F3110W	Ws4IA	644	984	A	TX	76	9x3¼x1¼	A
2	(D)....DD145H	.....	167	185	36000	13900	11.00/20	12.00/24	Cum HB600	6 4⅛x6	672	17.	500	150–1800	7-4½x16½	Y	Fu 4B86♦	10	Tim 1758W	2F	H	7.33–10.3	Tim F409CW	Ws4IA	644	984	A	TX	77	9¼x3¾x⅝	A
3	Walter (e.f.)..FZM	.....	126	150	24000	9000	12.00/20S	.....	Wau MZA	6-4¼x4¾	401	5.6	290	125–2600	7-2⅝x12½	Y	Own FJN	6	Own M8	2	H	** –8.00	Own FJ	O4IA	470	670	G	FI	84	12x3½x½	B
4	(e.f.).....AEB	.....	126	150	32000	13000	12.00/24S	.....	Wau 140GZ	6-4½x5½	554	6.2	440	150–2250	7-3¼x14	Y	Own FC	6	Own FCC	2	H	** –9.00	Own FC	O4IA	585	890	G	FI	96	14x3¾x½	B
5	(e.f.).....AGB	.....	138	162	32000	14000	12.00/24S	.....	Wau 145GK	6-5¼x6	779	6.2	585	185–2900	7-3½x17¾	Y	Own FA	6	Own FCC	2	H	** –9.00	Own FC	O4IA	585	890	C	FI	108	14x3¾x½	B
6	(e.f.).....AGR	.....	138	162	42000	15000	12.00/24D	.....	Wau 145GK	6-5¼x6	779	6.2	585	185–2000	7-3½x17¾	Y	Own FA	6	Own FCR	2	H	** –9.00	Own FC	O4IA	585	890	G	FI	108	14x3¾x½	B
7	Ward La Fr..FD1	.....	.....	.....	35000	▲11500	11.00/22	11.00/22	Cont 6513	6-4½x5¾	513	5.9	405	180–2800	7-3¼x14½	..	Ful 5A620	5	Tim R462W	S2	R	** –8.15	Tim F3100W	BW4IA	627	1029	Co	PM	.....	10x3x⅄	C
8	(D).....FD2	.....	.....	.....	35000	▲12000	11.00/24	11.00/24	Cum HB600	6–5½x6	672	17.	500	150–1800	7-4½x16¾	..	Ful 5A920	5	Tim R462W	S2	R	** –8.15	Tim F3100W	BW4IA	627	1029	Co	PM	.....	10x3x⅄	C
9	Willys Jp....CJ-3A	1195*	80	80	3500	*2108	6.00/16S	7..0/15S	Own CJ-3A	4–3⅛x4⅜	134	6.5	105	60–4000	3-2.33x5.48	N	WG T90C	‡6	Spi 41	Hy½	H	** –5.38	Spi 25	B4IH	118	198	a	F	.....	4x1¾x⅄	P
10	.....4WD	1597*	118	118	5300	*3115	7.00/16S	.....	Own 473	4–3⅛x4⅜	134	7.4	114	72–4000	3-2.33x5.48	N	WG T90C	‡6	Tim 51540	S½	H	** –5.38	Spi 25	B4IH	176	276	a	2I	42.28	5½x2x⅄	TD
	Six-Wheelers Wheels ▼ Driven																														
11	Corbitt																														
12	....G302R34-4R	.....	173	....	34500	.....	8.25/20	9.00/20	Con B6427	6–4⅄x4⅞	427	5.9	325	127–2600	7-2⅜x13½	Y	Fu 5A430	5	Tim 1055	SdF	L	5.71–7.40	Tim 35000	Ws6IA	.....	.....	a	TX	88	8½x3¼x⅄	TL
13	....G402R40-4R	.....	173	....	40000	.....	9.00/20	10.00/20	Con T6427	6–4⅄x4⅞	427	6.3	335	151–2600	7-2⅝x13½	Y	Fu 5A620	5	Tim 1555	S3F	L	5.57–7.80	Tim 35000	Ws6IA	731	1058	a	TD	88	8½x3¼x⅄	TL
14	(T)(D)D808Q46-2C	.....	136	....	46000	.....	10.00/20	11.00/22	Cum HRBB600	6–5½x6	743	17.	540	175–2000	7-4½x16½	Y	Fu 5C720	5	Tim R300	2F	H	4.93–5.91	Tim FE900	Ws5IA	1032	1578	a	2M	68	8x3¼x¼	TL
15	(D) D802R46-4R	.....	188	....	46000	.....	10.00/20	11.00/20	Cum HRB600	6–5½x6	743	17.	540	165–1800	7-4½x16½	Y	Fu 10B1120	10	Tim SW3022	WF	L	4.71–6.17	Tim FE900	Ws6IA	1073	1554	a	TD	84	10½x3¼x⅛	TL
	Dodge																														
16	B2VXL, B2VX	.....	154	190	34000	.....	9.00/20	10.00/20	Own T159	6–3¾x5	331	6.5	270	128–3000	7-3x11.2	Y	NP 88450	5	Tim SBD1555	HyS	L	6.8– 7.8	Tim35020NX9	T6IA	737	1056	C	TX	84	10x3x⅛	CP
17	B2YX, B2YXL	.....	154	190	40000	.....	10/20D	10.00/20	Own T199	6–4x5	377	6.5	330	154–3000	7-3x11.23	Y	Cla 290V2	5	T SD3010P	2	L	** –8.27	Tim FD900	T6IA	959	1470	c	TX	84	10½x3⅄x⅄	CP
18	Duplex....TH6	.....	162	220	30000	9180	8.25/20	9.00/20	Her JXD	6–4x4½	320	6.2	240	113–3000	7-2½x10‡‡	Y	Fu 5B33‡	10	Tim SBD1055	BF	L	**–6.16	Tim 32502H	L6IHV	513	839	A	TX	83¼	9½x3½x⅄	L
19	.....RH-6	.....	160	208	40000	11500	10.00/20	11.00/20	Her WXLC3	6–4¼x4¾	401	5.8	312	139–2600	7-2⅝x13¼	Y	Fu 5A43	5	Tim SD3010	2F	R	8.27	Tim 35100	WS61A	1075	1525	A	TX	73¼	10½x3½x⅄	L
20	(D).....L6	.....	172	208	45000	15000	11.00/20	12.00/20	Cum HB600	6–4½x6	672	17.	495	150–1800	7-4½x16½	Y	Fu 5A920	5	Tim SD454	SF2	L	6.8–8.15	Tim 26450	Ws6IA	1137	1625	A	TX	77½	10½x3½x⅄	L
21	Federal....663MA	.....	179	225	40000	14500	10.00/20	10.00/22	Con R6602‡‡	6–4⅞x5½	602	...	466	205–3000	7-3¼x14½	Y	Fu 5A65▼	15	T SW3012P†	WF	R	** –6.16	Tim FE900	Ws6IA	1082	1569	a	TD	108	10½x3½x⅄	1 fL
22	.....664MAB	.....	179	225	55000	15850	11.00/22	12.00/20	Con R6602‡‡	6–4⅞x5½	602	...	466	205–3000	7-3¼x14½	Y	Spi 7741▼	12	Tim SW456P	WF	R	** –7.6	Tim 27452W	Ws6IA	1308	1888	a	TD	108	10½x3½x⅄	1 fL
23	.....664MA	.....	179	225	55000	1o950	11.00/22	12.00/20	Con R6602‡‡	6–4⅞x5½	602	...	466	205–3000	7-3¼x14½	Y	Spi 7741▼	12	Tim SD462P	BR	R	** –8.15	Tim 27452W	Ws6IA	1092	1624	a	TD	108	10½x3½x⅄	1 fL
24	.....629M	.....	163	199	27500	8600	8.25/20	9.00/20	Her JXDF	6–4x4¼	320	...	250	131–3200	7-2½x10‡‡	Y	Cla 205V‡‡▲	10	TSBD1055dph	SF	R	7.53 10.35	Tim 32514H	LT61HV	544	914	a	TX	84	9½x3½x½	1 fL
25	.....629ML	.....	163	199	27500	8635	8.25/20	9.00/20	Her JXLDF	6–4x4¼	339	...	272	131–3200	7-2½x10‡‡	Y	Cla 205V‡‡▲	10	TSBD1055dph	SF	R	7.53 10.35	Tim 32514H	LT61HV	514	914	a	TX	84	9½x3½x½	1 L
26	.....635M	.....	167	203	36000	10400	9.00/20	9.00/20	Con T6371F	6–4½x4⅝	371	...	290	140–3000	7-2½x13½	Y	Cla 290V▲	10	TSBD1555dph	SF	R	8.33 11.47	Tim FD900	LT61HV	752	1132	a	TX	84½	10½x3½x⅄	1 L
27	.....645M	.....	167	215	38000	12325	10.00/22	10.00/22	Con T6427‡‡	6–4⅄x4½	427	...	347	155–2600	7-2½x13½	Y	Cla 290V	5°	T-SD3010P♦	BR	R	** –9.16	Tim FD900	Ws6IA	1073	1550	a	TD	84½	10½x3½x⅄	1 fL
	Freightliner																														
28	(c.o.e.).....A64	.....	176	....	54000	▲14000	10.00/22	.....	Cum NHB	6–5½x6	743	13½	575	200–2100	7-4½x16½	Y	Fu 4B86‡	12	Own	WF	H	6.66–8.20	Tim 27061	O4RIA	966	1450	a	TD	136	10½x3½x¼	D
29	F.W.D.....H6x6G	.....	Opt	Opt	.....	▲12150	9.00/20D	10.00/20	Wau MZA	6–4¼x4¾	404	5.6	291	129–2800	7-2⅝x12½	Y	Own H	10	Own H	SF	H	** –7.45	Own H	L6IHV	647	1281	a	T6	Opt	9x3x¼	C
30	.....HRC6X6G	.....	Opt	Opt	.....	▲12620	9.00/20D	10.00/20	Wau 140GKB	6–4½x5½	525	5.4	427	172–2600	7-3¼x13⅜	Y	Own H	10	Own H	SF	H	** –7.4	Own H	L6IHA	647	1281	a	T6	Opt	9x3x¼	C
31	.....MU6X6G	.....	Opt	Opt	.....	▲16003	11.00/20D	12.00/20	Wau 145GK	6–5¼x6	779	5.2	593	186–2030	7-3½x17¾	Y	Own U	10	Own U	SF	H	** –4.9	Own U	Ww6IA	726	1463	a	T6	Opt	10⅄x3x⅜	C
32	.....M6x6G	.....	Opt	Opt	.....	▲21000	11.00/24D	12.00/24	Wau 145GK	6–5¼x6	779	6.2	590	186–2000	7-3½x17¾	Y	Own M	10	Wis SD462	2F	L	** –6.06	Wis F409	WW6IA	1080	1680	a	T6	Opt	10⅄x3x⅜	P
33	(D)....M6X6D	.....	Opt	Opt	.....	▲21600	11.00/24D	12.00/24	Bu DC844	6–5¼x6½	844	...	605	180–1800	7-3¾x17	Y	Own M	10	Wis SD462	2F	L	** –5.6	Wis F409	WW6IA	1080	1680	a	T6	Opt	10⅄x3x⅜	P
34	Kenworth. (D). 522	.....	191	255	42000	13900	10.00/20	11.00/22	Cum HB6	6–4⅞x6	672	17.	500	150–1800	7-4½x16⅄	Y	BL 8241	4	T U200Pa††	H2F	H	5.91–9.76	Tim FE900N	Ws4IA	880	1368	a	TD	100	9½x3¼x⅄	C
35	.....(D)523.4R	.....	191	255	42000	14600	10.00/20	11.00/22	Cum HB6	6–4⅞x6	672	17.	500	150–1800	7-4½x16⅄	Y	BL 8241	4	T SW3012PA	WF	L	4.72–6.16	Tim FE900N	Ws4rIA	868	1400	a	TD	100	9½x3¼x⅄	C
36	.....(D)524.4R	.....	195	255	42000	15500	10.00/20	11.00/22	Cum HB6	6–4⅞x6	672	17.	500	150–1800	7-4½x16⅄	Y	BL 8241	4	Tim SW456P	WF	L	5.67–8.20	Tim FE900N	Ws4rIA	1016	1556	a	TD	104	9½x3¼x⅄	C
37	.....(D)548.4R	.....	191	....	36000	20200	11.00/22	12.00/24	Cum HB6	6–4⅞x6	672	17.	500	150–1800	7-4½x16⅄	Y	BL 8241	4	Tim SFD460P	B2F	L	8.07–11.5	Tim FE900N	Ws4rIA	1016	1556	a	TD	100	9½x3¼x⅄	abC
38	.....(D)552.4R	.....	202	....	50300	21030	13.00/24	13.00/24	Cum HB6	6–4⅞x6	672	17.	500	150–1800	7-4½x16⅄	Y	BL 8241	4	Tim SFD460P	B2F	L	8.07–11.5	Tim FE900N	Ws4rIA	1016	1556	a	TD	111	9½x3¼x⅄	dbC
39	(D).....584	.....	191	....	35000	24200	12.00/24	14.00/24	Cum HB6	6–4⅞x6	672	17.	500	150–1800	7-4½x16⅄	Y	BL 8241	4	Tim SD472P	B2F	L	8.07–11.5	Shu 12	Ws4rIA	1312	1956	a	TD	100	9½x3¼x⅄	dbC
40	(D).....825	.....	195	255	42000	14400	10.00/20	11.00/22	Cum HB6	6–4⅞x6	672	17.	500	150–1800	7-4½x16⅄	Y	BL 8241	4	T GSW458P	WF	L	5.67–8.20	Tim FE900N	Ws4rIA	1016	1556	a	TD	104	9½x3¼x⅄	C
41	829	.....	178	255	42000	13300	10.00/20	11.00/22	Wau 140GZ	6–4⅝x5½	554	6.4	450	188–2600	7-3x13‡‡	Y	Fu 5C650	5	T SD3010PA	B2F	L	6.84–10.2	Tim FE900N	Ws4rIA	868	1400	a	TD	87	9½x3¼x⅄	C
42	(D).....888	.....	194	....	110000	29000	14.00/24	.....	Cum NHB6	6–5½x6	743	15.	535	200–2100	7-4½x16⅄	Y	BL 8241	4	Tim CDB79	CD	.	** 14.71	Shu 12	Ws6IA	....	2447	a	TD	103	10¾x3½x‡‡	L
	Marmon-Herr.																														
43	(C).....R5-6	.....	156	....	22500	▲6850	7.50/20D	7.50/20	Ford	8–3⅄x3¾	239	6.4	180	100–3800	3–2⅝x4.71	N	Ford	4	Timken	S	H	** –6.67	Own	F–H	503	836	a	F	82⅄	7½x3x¼	C
44	(C).....R6-6	.....	180	....	22500	▲7100	7.50/20D	7.50/20	Ford	8–3⅄x3¾	239	6.4	180	100–3800	3–2½x4.71	N	Ford	4	Timken	S	H	** –6.67	Own	F–H	503	836	a	F	106¼	7½x3x¼	C
45	.....MH410-6	.....	182	....	34000	▲10600	9.00/20	10.00/20	Her WXLC3	6–4¼x4⅜	404	5.4	330	118–2800	7-2⅝x13¼	Y	Fu	5	Own	2B	H	** –8.43	Own	Ws..A	876	....	C	F	96	9‡‡x3x¼	T
46	.....MH-555-6	.....	182	....	42000	▲14000	11.00/20	11.00/20	Her RXC	6–4⅝x5¾	529	6.3	390	131–2200	7-3x13¼	Y	Fu	5	Own	2B	H	** –8.15	Own	Ws..A	1092	1608	C	F	93	10⅄x3x⅄	T
47	(C)...R5-COE6	.....	156	180	22500	▲7350	7.50/20D	7.50/20	Ford	8–3⅄x3¾	230	6.4	180	100–3800	3–2½x4.71	N	Ford	4	Ford	S	H	** –6.67	Own	F...H	303	563	A	F	106.1	7.08x2.8x¼	T
48	(C).....Q-5-6	.....	160	....	35000	▲9570	9.00/20	10.00/20	Ford	8–3½x4⅝	337	6.4	255	145–3600	3–2⅝x5.21	Y	Ford	5	Ford	H	H	** –6.80	Own	F...H	772	1161	A	F	85	9x3x¼	T
49	(C).....Q-4-6	.....	184	....	35000	▲9700	9.00/20	10.00/20	Ford	8–3½x4⅝	337	6.4	255	145–3600	3–2⅝x5.21	Y	Ford	5	Ford	H	H	** –6.80	Own	F...H	772	1161	A	F	109	9x3x¼	T
50	(C).....Q-5L-5	.....	172	....	35000	▲9570	9.00/20	10.00/20	Ford	8–3½x4⅝	337	6.4	255	145–3600	3–2⅝x5.21	Y	Ford	5	Ford	H	H	** –6.80	Own	F...H	772	1161	A	F	97	9x3x¼	T
51	(C).....Q-6L-6	.....	203	....	35000	▲9825	9.00/20	10.00/20	Ford	8–3½x4⅝	337	6.4	255	145–3600	3–2⅝x5.21	Y	Ford	5	Ford	H	H	** –6.80	Own	F...H	772	1161	A	F	128	9x3x¼	T
	Oshkosh																														
52	.....W712-6X6	.....	178	Opt	47000	18200	11.00/20D	.....	Her RXLDH	6–4¾x5¼	558	...	462	190–2600	7-3½x13¼	Y	Fu 5A650	10	Tim SFD450	2F	H	** –6.31	Own-Tim	LT6IA	.....	.....	.....	Opt	110	10 1⅛–3 1⅛–1⅛	B
53	(D)...W1500CD	.....	Opt	Opt	47000	19703	11.00/20	12.00/20	Cum HB600	6–4⅞x6	672	...	500	150–1800	7-4½x16	Y	Fu 4A86	8	Tim SD454W	2F	H	** –6.31	Own Tim	LT6IA	1080	1625	G	Opt	Opt	10¼–3½–.3	B
54	(D)...W1600BD	.....	Opt	Opt	60000	22770	11.00/24D	12.00/24	Bu 6DC844	6–5¼x6½	844	...	600	180–1830	7-3¾x17	Y	Fu 4BI86	12	Tim SD462	2F	H	** –6.14	Own-Tim	LT6IA	1080	1625	G	Opt	Opt	12⅜–3⅞–⅜	B
55	(D) °°W1600BDH	.....	Opt	Opt	60000	21300□	11.00/24D	12.00/24	Bu 6DC844	6–5¼x6½	844	...	600	180–1800	7-3¾x17	Y	Fu 4BI86	12	Tim SD462	2F	H	** –9.82	Own-Tim	LT6IA	1080	1625	G	Opt	Opt	12⅜–3⅞–⅜	B
56	(D)..°°W1602BDH	.....	Opt	Opt	950 0	29300	14.00/24D	14.00/24	Bu 6DC844	6–5¼x6½	844	...	600	180–1800	7-3¾x17	Y	Fu 4BI86	12	Tim SD472	2F	H	** –13.9	Own-Tim	LT6IA	....	2217	G	Opt	Opt	12⅜–3⅞–⅜	B

▲ Includes Cab.
‡‡ Overdrive optional.

(Turn to Page 94, Please)

• Complete vehicle with pick-up type body
†† Timken T13126 FA Trailing Axle
▼ Auxiliary transmission Spicer 703F with 3 forward speeds.
♦ RModel 3010 optional. † SW3010, SD3010 and SW3013 optional.

‡ Three speed transmission—2 speed transfer case.
▲ Torque divider, Timken T70–2 speed., T50 optional.
°° Hydraulic Coupling. ‡‡ Diesel engine optional.
‡—Torque Divider, Timken T70-2 speed.

□ Chassis weights on duals Front, Center and Rear.
‡—Fuller 3B92 auxiliary transmission.
° Auxiliary transmission Spicer 6?31B at extra cost gives 15 forward speeds
♦—Timken T76-Two speed transfer case. ° Timken T77 2-speed Transfer Case.

Life "begins" AT 550,000 MILES...

WITH HOOBLER UNDERCARRIAGE

AFTER more than half a million miles, the trailer bed pictured here is just plain worn out. But not the Hoobler Undercarriage. This unit averaged 100,000 miles per year, carried about 40,000 lbs. per trip. And now it's ready to go to work under a new bed—no rebuilding—good for plenty *more* service.

A Hoobler Undercarriage will outlast practically *any* trailer bed or body. It can be transferred from one body to another. But its long life is just *one* of its many advantages.

TIRE MILEAGE INCREASED OPERATING COSTS CUT

The Hoobler Undercarriage permits the trailer to follow through behind the tractor . . . to ease around the tightest corners or travel straightaways with practically no tire scuffing. Actual records show tires on a Hoobler-equipped unit have run 250,000 miles—with no retreads! What's more, Hoobler's 9-ft. axle spacing generally permits greater payloads.

Simple in design and construction, the Hoobler Undercarriage is quickly inspected, easily serviced, requires little routine maintenance. It's used on tankers, high sides, vans or flat tops (28 feet and over). Find out how it can help you make savings every mile, year in and year out. For complete information, write The Union Metal Manufacturing Company, Canton 5, Ohio.

UNION METAL

DESIGNERS AND PRODUCERS OF STEEL PRODUCTS SINCE 1906

Builder of The Hoobler Undercarriage

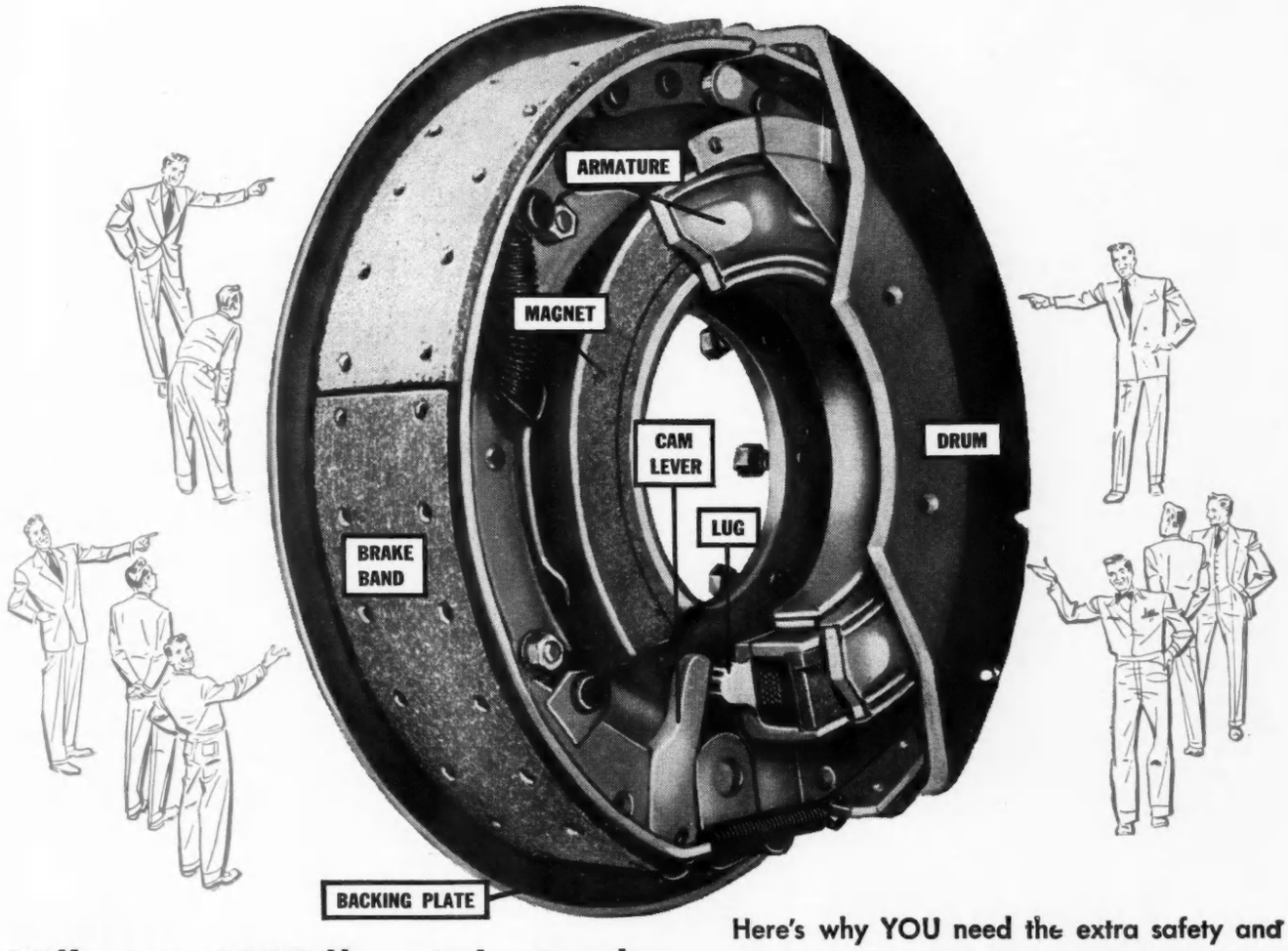
(Continued from Page 92)

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Standard	WHEEL-BASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear: Standard Front and Rear	TIRE SIZES: Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings: Number Diameter and Length	Governor Standard	TRANSMISSION: Make and Model	Forward Speeds	REAR AXLE: Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE: Make and Model	BRAKES SERVICE: Make Location Type Operation	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME: Side Rail Dimensions	Type
	Oshkosh, Cont.																														
1	W1600BG		Opt	Opt	60000	22770	11.00/24D	12.00/24	Bu MO893	6–5½x6	893		625	200–1800	7–3¼x17	Y	Fu 4BI86	12	Tim SD462	2F	H	** –9.82	Own-Tim	LT6IA	1080	1625	G	Opt	Opt	12⅜–3⅜–¾	B
2	(D) W1600CL		Opt	Opt	60000	23400□	11.00/24D	12.00/24	Cum HB600	6–4½x6	672		500	150–1800	7–4½x16	Y	Fu 4BI86	12	Tim SD462	2F	H	** –6.14	Own-Tim	LT6IA	1080	1625	G	Opt	Opt	12⅜–3⅜–¾	B
3	(D) W1600CDS		Opt	Opt	60000	23700□	11.00/24D	12.00/24	Cum HBS600	6–4½x6	672		635	200–1800	7–4½x16	Y	Fu 4BI86	12	Tim SD462	2F	H	–9.82	Own-Tim	LT6IA	1080	1625	G	Opt	Opt	12⅜–3⅜–¾	B
4	(D) **W1600CDH		Opt	Opt	60000	24000□	11.00/24D	12.00/24	Cum HB600	6–4½x6	672		500	150–1800	7–4½x16	Y	Fu 4BI86	12	Tim SD462	2F	H	** –9.82	Own-Tim	LT6IA	1080	1625	G	Opt	Opt	12⅜–3⅜–¾	B
5	(D) **W1600CDSH		Opt	Opt	60000	24300□	11.00/24D	12.00/24	Cum HBS600	6–4½x6	672		635	200–1800	7–4½x16	Y	Fu 4BI86	12	Tim SD462	2F	H	** –6.14	Own-Tim	LT6IA	1080	1625	G	Opt	Opt	12⅜–3⅜–¾	B
	Peterbilt																														
6	(D) 350		193	Opt	42000		10.00/20D	11.00/22	Cum HB600	6–4½x6	672	17.5	500	150–1800	7–4½x16½	Y	Spi 8041	12	Tim SW3012W	WF	R	6.00– 8.5	Tim FE900DPA	Ws6IA	1125	1569	...	TD	99½	10½x3½x⅝	CT
7	(D) 360		198	Opt	54000		10.00/20D	11.00/22	Cum HB600	6–4½x6	672	17.5	500	150–1800	7–4½x16½	Y	Spi 8041	12	Tim SW456W	WF	R	6.00–10.2	Tim FE900DPA	Ws6IA	1005	1517	...	TD	104½	10½x3½x⅝	CT
8	(D) 370		198	Opt	58000		10.00/20D	11.00/22	Cum HB600	6–4½x6	672	17.5	500	150–1800	7–4½x16½	Y	Spi 8041	12	Tim SW456W	WF	R	6.00–10.2	T 27463	Ws6IA	1084	1626	...	TD	104½	10½x3½x⅝	CT
9	(D) 380		194	Opt	58000		10.00/20D	11.00/22	Cum HB600	6–4½x6	672	17.5	500	150–1800	7–4½x16½	Y	Spi 8041	12	Tim SD462W	2F	R	** –8.07	T 27463	Ws6IA	1084	1626	...	TD	98½	10½x3½x⅝	CT
10	(D) 390		197	Opt	79000		12.00/24	14.00/24	Cum HB600	6–4½x6	672	17.5	500	150–1800	7–4½x16½	Y	Spi 8041	12	Tim SD472W	2F	R	** –8.07	T 27463	Ws6IA	1622	2215	...	TD	103½	10½x3½x⅝	CT
11	Reo E-216		150	203	28000	9615▲	8.25/20	9.00/20	Own 292	6–3⅞x4½	292	6.5	224	124–3300	7–2½x9.408	Y	Cla 205V	5	Tim SBD1055	8F	T	5.28–7.4	Tim 32500	LT6IVH	500	842	var	TX	85⅝	9½x3½x⅝	T¶P
12	E-226		150	203	36000	10250▲	9.00/20	10.00/20	Own 331	6–4½x4¾	331	6.4	264	140–3200	7–2½x9.408	Y	Cla 205V	5	Tim SBD1555	8F	T	5.57–7.8	Tim 32500	LT6IVH	560	944	var	TX	85⅝	9½x3½x⅝	T¶P
13	E-236		169	200	42000	12980▲	10.00/20	11.00/20	Con T6427	6–4⅞x4½	427	5.9	338	145–2600	7–2½x13.6	Y	Cla 270V	5	Tim SD3010	SFd	T	7.5 –8.27	Tim 36000	TWs6IA	1082	1570	var	TD	104½	9½x3½x⅝	T¶B
14	306		186	248	45000	15520▲	10.00/20	11.00/20	Con R6513	6–4½x5½	513	5.7	392	167–2600	7–3¼x14.7	Y	Spi 6252A	5	Tim SD3010	SFd	T	7.5 –8.27	Tim 36000	TWs6IA	1082	1570	var	TD	108½	10½x3½x⅝	T¶
15	316		186	248	55000	16480▲	10.00/20	11.00/22	Con R6602	6–4½x5½	602	5.7	456	194–2600	7–3¼x14.7	Y	Spi 6253	5	Tim SD454	SFd	T	7.33–10.27	Tim 36000	TWs6IA	1230	1778	var	TD	108½	10½x3½x⅝	T¶B
	Sterling																														
16	HB8130		164	183	32000	11000	8.25/20	10.00/20	Wau 6MZA	6–4¼x4¼	404	5.6	290	130–3000	7–2½x12½	Y	Fu 5A43	5	T-SBD1555DPH	8F	L	6.80–13.14	T-35011H	T6IHV	664	1134	A	TX	83	9x3 ¼x ¼	A
17	HD8140		164	183	36000	11800	9.00/20	10.00/20	Wau 6MZA	6–4¼x4¾	404	5.6	290	130–3000	7–2½x12½	Y	Fu 5A43	5	T-SD3010PA	2F	L	6.84–10.22	T-35011TW	Ws6IA	1074	1554	A	TX	83	9x3 ¼x ¼	A
18	HW8160		164	183	42000	12800	10.00/20	11.00/22●	Wau 6SRKR	6–4⅝x5½	517	5.5	368	125–2250	7–3x13⅞	Y	Fu 5A62	5	T-SW3010PA	WF	L	5.40–8.50	T-36000TW	Ws6IA	1082	1574	A	TX	83	9x3 ¼x ¼	A
19	HW8235		182	193	52000	15700	11.00/20	11.00/24	Wau 145GK	6–5¼x6	779	6.2	585	186–2100	7–3½x17¾	Y	Fu 4B86	4	T-SW456P	WF	L	5.67–8.20	T-27454W	Ws6IA	1308	1892	A	TX	92	9 ¼x3 ¼x ⅝	A
20	(D) HW8160H		182	193	42000	14250	10.00/20	11.00/22	Cum HB600	6–4½x6	672	17.5	500	150–1800	7–4½x16½	Y	Spi 8041	12	Tim SW3012PA	WF	L	4.71–6.17	T-36000TW	Ws6IA	1082	1574	A	TX	92	9x3 ¼x ¼	A
21	(D) HW8235H		182	193	52000	16000	11.00/20	11.00/24	Cum HB600	6–4¼x6	672	17.5	500	150–1800	7–4½x16½	Y	Fu 4B86	4	T-SW456P	WF	L	5.66–8.20	T-27454W	Ws6IA	1308	1892	A	TX	92	9 ¼x3 ¼x ⅝	A
22	HC8195		170	189	48000	15300	10.00/20	11.00/22	Wau 140GK	6–4½x5½	525	6.0	426	142–2200	7–3¼x13⅞	Y	Fu5A62-3A92	15	Own 195W	CD	R	6.04–7.31	T-36000TW	Ws6IA	1082	1802	A	TX	83	9 ¼x3 ¼x ⅝	A
23	HC8265		182	193	60000	17750	11.00/20	12.00/24	Wau 145GK	6–5¼x6	779	6.2	585	186–2100	7–3½x17¾	Y	Fu 4B86♦	12	Own 265W	CD	R	9.21–13.16	T-27454W	Ws6IA	1060	1912	A	JX	92	9 ¼x3 ¼x ⅝	A
24	HC8297		182	193	70000	20750	12.00/24‡	13.00/24▲	Wau 145GK	6–5¼x6	779	6.2	585	186–2100	7–3½x17¾	Y	Fu 4B86♦	12	Own 330W	CD	R	9.21–13.16	T-27454W	Ws6IA	1280	1988	A	JX	92	9 ¼x3 ¼x ⅝	AL
25	HC8330		174	187	80000	23150	12.00/24	14.00/24▲	Wau 145GK	6–5¼x6	779	6.2	585	186–2100	7–3½x17¾	Y	Fu 4B86♦	12	Own 330W	CD	R	9.21–13.16	T-27454W	Ws6IA	1280	1988	A	JX	91	12x3 ¼x ⅝	AL
26	(D) HC8195H		182	193	48000	16000	10.00/20	11.00/22	Cum HB600	6–4½x6	672	17.5	500	150–1800	7–4½x16½	Y	Fu4B86-3A92	12	Own 195W	CD	R	6.04–7.31	T-36000TW	Ws6IA	1082	1802	A	TX	92	9 ¼x3 ¼x ⅝	A
27	(D) HC8265H		182	193	60000	18100	11.00/20	12.00, 24	Cum HBD600	6–4½x6	672	17.5	500	150–1800	7–4½x16½	Y	Fu 4B86♦	12	Own 265W	CD	R	9.21–13.16	T-27454W	Ws6IA	1160	1912	A	JX	92	9 ¼x3 ¼x ⅝	A
28	(D) HC8297H		182	193	70000	21050	12.00/24‡	13.00/24▲	Cum HBD600	6–4½x6	672	17.5	500	150–1800	7–4½x16½	Y	Fu 4B86♦	12	Own 330W	CD	R	9.21–13.16	T-27454W	Ws6IA	1280	1988	A	JX	92	9 ¼x3 ¼x ⅝	AL
29	(D) HC8330H		174	187	80000	23450	12.00/24	14.00/24▲	Cum HBD600	6–4½x6	672	17.5	500	150–1800	7–4½x16½	Y	Fu 4B86♦	12	Own 330W	CD	R	9.21–13.16	T-27454W	Ws6IA	1280	1988	A	JX	91	12x3 ¼x ⅝	AL
	Truckstell																														
30	(C) F2X28 2F		156	237	28000	6468▲	7.50/20♣	8.25/20-10	Ford	8–3⅛x3¾	239	6.8	180	100–38[illegible]0	3–2.49x4.9	N	Ford	4	Ford■	SF	H	5.83–8.11	Ford	F6IHV	502	835	•	TX	82½	8x2.8x.46	TL▼
31	(C) F2X29-0(coe) 2F		134	224	28500	7083▲	7.50/20♣	8.25/20-10	Ford	8–3⅛x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Ford	4	Ford■	SF	H	5.83–8.11	Ford	F6IHV	502	835	•	TX	82½	8x2.8x.46	TL▼
32	(C) F2X28-7 2F		156	250	28000	7897▲	7.50/20♣	8.25/20-10	Ford	8–3½x4¾	337	6.4	255	145–3600	3–2.87x5.0	Y	Ford	5	Ford	HyF	H	6.8	Ford	F6IHV	560	935	•	TX	82½	9¼x3x1½	TL▼
33	(C) F2X34-7 2F		156	250	34000	8100▲	8.25/20†	9.00/20-10	Ford	8–3½x4¾	337	6.4	255	145–3600	3–2.87x5.0	Y	Ford	5	Ford	HyF	H	6.8	Ford	F6IHV	560	935	•	TX	82½	9¼x3x1½	TL▼
34	(C) F2X34-8 2F		156	250	34000	8704▲	9.00/20	9.00/20-10	Ford	8–3½x4¾	337	6.4	255	145–3600	3–2.87x5.0	Y	Ford	5	Ford■	SF	H	6.5 –8.87	Ford	F6IHV	695	1081	•	TX	82½	9¼x3x1½	TL▼
35	(C) F2X40 2F		156	250	40000	9309▲	9.00/20†‡	10.0/20-10	Ford	8–3½x4¾	337	6.4	255	145–3600	3–x.87x5.0	Y	Ford	5	Ford■	SF	H	6.5 –8.87	Ford	F6IHV	835	1232	•	TX	82½	9¼x3x1½	TL▼
36	(C) C2X28 2F		157	247	28000	6629▲	7.50/20D	9.00/20-10	Chev.	6–3⅜x3⅛‡	235	6.6	192	93–3100	4 8td.Chev	Y	Chev.	4	Chev.▼	HyF	H	6.17	Chev.	C6IHV	530	808	•	2I	82¼	9¼x3x1½	C▼
37	(C) C2X29-0(coe) 2F		130	224	29000	7204▲	7.50/20D	9.00/20-10	Chev.	6–3⅜x3⅛‡	235	6.6	192	93–3100	4 8td.Chev	Y	Chev.	4	Chev.▼	HyF	H	6.17	Chev.	C6IHV	530	808	•	2I	82¼	9¼x3x1½	C▼
38	(C) F4X26 4R		144	209	26000	7300▲	7.50/20	8.25/20*	Ford	8–3⅛x3¾‡	239	6.8	180	100–3800	3–2.49x4.9	N	Ford	8	Ford	SF	R	** –6.67	Ford	F6IHV	498	836	Co	TX	64	8x3x.46	TL▼
39	(C) F4X27 (coe) 4R		126	185	27000	7665▲	7.50/20	8.25/20*	Ford	8–3⅛x3¾‡	239	6.8	180	100–3800	3–2.49x4.9	N	Ford	8	Ford	SF	R	** –6.67	Ford	F6IHV	498	836	Co	TX	71	8x3x.46	TL▼
40	F4X29		156	200	29000	7850▲	7.50/20	8.25/20-10	Ford	8–3⅛x3¾‡	239	6.8	180	100–3800	3–2.49x4.9	N	Ford♦♦	12	Ford	HyF	R	** –7.2	Ford	F6IHV	498	836	Co	TX	64	8x3x.46	TL▼
41	F4X30		126	185	30000	8200▲	7.50/20	8.25/20-10	Ford	8–3⅛x3¾‡	239	6.8	180	100–3800	3–2.49x4.9	N	Ford♦♦	12	Ford	HyF	R	** –7.2	Ford	F6IHV	498	836	Co	TX	71	8x3x.46	TL▼
42	(C) F4X29 4R		156	200	29000	7800▲	8.25/20	9.00/20	Ford	6–3.5x4.4	254	6.8	212	110–3400	4–2.8x5.0	Y	Ford♦♦	12	Ford	Hy	R	** –7.2	Ford	F6IHV	498	836	Co	TX	82	8x3x½	TL▼
43	(C) F4X30 4R		126	185	30000	8200▲	8.25/20	9.00/20	Ford	6–3.5x4.4	254	6.8	212	110–3400	4–2.87x5.0	Y	Ford♦♦	12	Ford	Hy	R	** –7.2	Ford	F6IHV	498	836	Co	TX	71	8x3x½	TL▼
44	(C) F4X34 4R		156	228	34000	10000▲	8.25/20	9.00/20*	Ford	8–3½x4¾	337	6.4	255	145–3600	3–2.87x5.0	Y	Ford ♦♦	15	Ford	HyF	R	** –6.8	Ford	F6IHV	745	1169	Co	TX	82	9¼x3x1½	TL▼
45	(C) F4X38 4R		156	228	38000	10650▲	9.00/20	10.00/20*	Ford	8–3½x4¾	337	6.4	255	145–3600	3–2.87x5.0	Y	Ford ♦♦	15	Ford	HyF	R	** –7.16	Ford	F6IHV	825	1231	C	TX	82	9¼x3x1½	TL▼
46	(C) C4X28 4R		151	217	28000	7500▲	7.50/20	8.25/20*	Chev.	6–3⅜x3⅛‡	235	6.6	192	93–3100	4–8t. Chev.	Y	Chev. ♦♦	8	Chev.	HyF	R	** –6.17	Chev.	C6IHV	506	780	Co	2I	68	9¼x3x1½	C▼
47	(C) C4X29 (coe) 4R		125	192	29000	7865▲	7.50/20	8.25/20*	Chev.	6–3⅜x3⅛‡	235	6.6	192	93–3100	4–8t. Chev.	Y	Chev. ♦♦	8	Chev.	HyF	R	** –6.17	Chev.	C6IHV	506	780	Co	2I	69	9¼x3x1½	C▼
48	C4X29		151	217	29000	8040▲	7.50/20	9.00/20-10	Chev.	6–3⅜x3⅛‡	235	6.6	192	93–3100	4–8t. Chev.	Y	Chev. ♦♦	12	Chev.	HyF	R	** –6.17	Chev.	C6IHV	506	780	Co	2I	68	9¼x3x1½	C▼
49	C4X30		125	192	30000	8400▲	7.50/20	9.00/20-10	Chev.	6–3⅜x3⅛‡	235	6.6	192	93–3100	4–8t. Chev.	Y	Chev. ♦♦	12	Chev.	HyF	R	** –6.17	Chev.	C6IHV	506	780	Co	2I	69	9¼x3x1½	C▼
50	**Ward La Fr.** DIT‡		180	220	39500		10.00/20	11.00/20	Con T6427	6–4⅜x4⅞	427		340	152–2600			Fu 5A43♦♦	15	Tim SD3010P	2F	L	** –8.27	Tim 35017TW	T4IA				D		10x3½x⅞	C
51	D2KT▲▲		180	220	39500		10.00/20	11.00/20	Wau 140GK	6–4½x5½	525		425	168–2400			Fu 5C65♦♦	15	Tim SD3010P	2F	L	** –7.50	Tim 35017TW	T4IA				D		10x3½x⅞	C
52	D2ZT▲▲		180	220	39500		10.00/20	11.00/20	Wau 140GZ	6–4½x5½	554		458	184–2400			Fu 5C65♦♦	15	Tim SD3010P	2F	L	** –7.50	Tim 35017TW	T4IA				D		10x3½x⅞	C
53	D3T▲▲		180	220	39500		10.00/20	11.00/20	Con R6572	6–4¾x5⅝	572		440	198–2600			Fu 5C65♦♦	15	Tim SD3010P	2F	L	** –7.50	Tim 35017TW	T4IA				D		10x3½x⅞	C
54	D3ST▲▲		180	220	39500		10.00/20	11.00/20	Con R6602	6–4¾x5⅝	602		463	206–2600			Fu 5C65♦♦	15	Tim SD3010P	2F	L	** –7.50	Tim 35017TW	T4IA				D		10x3½x⅞	C
55	(D) D5T▲▲		180	220	42000		11.00/20	11.00/20	Cum HB600	6–4½x6	672		500	150–1800			Fu 5C72♦♦	15	Tim SD3010P	2F	L	** –6.84	Tim FE900	T4IA				D		10x3½x⅞	C
56	(D) D5RT▲▲		180	220	42000		11.00/20	11.00/20	Cum HRB600	6–5½x6	743		540	165–1800			Fu 5C72♦♦	15	Tim SD3010P	2F	L	** –6.84	Tim FE900	T4IA				D		10x3½x⅞	C
57	(D) D5NT▲▲		180	220	42000		11.00/20	11.00/20	Cum NHB600	6–5½x6	743		540	200–2100			Fu 5C72♦♦	15	T SW3012PA	WF	L	** –6.17	Tim FE900	T4I◁				D		10x3½x⅞	C

▲ Includes Cab.
♣ Front only; Rear 8.25/20.
‡ Rear only; Front 11.00/24.
†—Available with optional rear axles.
▲▲—Available with 11.00/22 or 12.00/20 tires for G.V.W. of 60,000 lbs. and optional front and rear axles.
♦ Auxiliary transmission, Spicer 8031.
■ Two speed axle with vacuum shift.
▲ Rear only; Front 12.00/24.
♦♦—Auxiliary transmissions Fuller 3A65, 3B65, 3A92 and 3B92.
† Front only; Rear 9.00/20.
†‡ Front only; Rear 10.00/20.
□ With Baumis auxiliary transmission.
●—When 11.00/22 tires are required it is necessary to furnish 52 inch axle spacing.
** Hydraulic coupling.
▼ Two speed axle available—6.13–8.10.
▼ Including slip-over reinforcing frame channels.
♦♦ With Baumis power divider.
□ Chassis weights on duals front, center and rear.
• Composite Cast Alloy Iron.
‖ Cast Alloy Iron.
* Single front dual rear.

Announcing A New 15" x 3"

WARNER ELECTRIC BRAKE of ADVANCED DESIGN



Will stop 8000 lbs. Axle Loads Using 7.50x20 Dual Tires, Provides 116 sq. inches of Working Lining.

This new powerful Warner Electric Brake of two shoe construction, incorporates the most advanced brake engineering — gives you an entirely new margin of safe, effective, stopping power. Fits 18" and 20" wheels on all types of trailers — semi, cargo, pole, logging, auto transport and utility. Rigid and rugged well beyond the axle loads and sizes for which recommended. And no brake but the Warner Electric Brake offers you the fast-acting, smooth controlled braking power — power developed within the brake itself — that this great new brake gives you. Warner Electric Brakes have been performance-proved by leading tractor-trailer operators during 23 years of efficient, dependable service. Standardize on Warner Electric Brakes in your fleet. Write for information on the full line.

WARNER ELECTRIC BRAKE MFG. CO. • BELOIT, WIS.

Here's why YOU need the extra safety and protection only Warner Electric Brakes give!

Only two flexible wires required from truck battery to the brakes.

Sturdy cable connection from truck to trailer makes all electrical contacts.

Only Warner Electric Brakes offer complete synchronization with hydraulic or air-braked tractors.

"Vari-Load" dial on dash presets correct braking power.

There's nothing to get knocked-off, freeze, split or break . . . nothing to come loose, rattle and bang.

WARNER

THE ORIGINAL AND PROVEN

ELECTRIC BRAKES

SINCE 1927

. . . T. GORDON MASON, appointed to the position of general sales manager and director of marketing service of Harben, Inc., Dallas, Tex.

. . . PARK Q. WARY, manager of the Replacement Sales Div. of National Motor Bearing Co., Inc., since 1938, advanced to director of sales for NMB and its two subsidiaries, Arrowhead Rubber Co., and National Seal Co. E. F. REISING, appointed sales manager of the Industrial Div.; and PARK WARY, JR., promoted sales manager of Replacement Div.

. . . WILLIAM H. WEISS, appointed representative for Rusco brake linings and clutch facings in the Philadelphia area.

. . . Men newly appointed by the Dayton Rubber Co., Dayton, Ohio. E. K. LOFTON, who will serve as regional manager of Chicago region; T. J. EHRHART, who will serve as regional manager of the Dallas region; A. L. VAN DER KAR, who will serve as regional manager of the New York region; M. E. RUNNER, who will serve as regional manager of the Los Angeles region.

. . . WALTER H. KETEL, Denver branch manager for The Trailmobile Co.

. . . DAVID M. WATERHOUSE, manager of railway, marine, bus, truck and transportation sales of Speco, Inc., Cleveland.

. . . B. L. CROWE, promoted to manager of new accounts in the southern division of the General Tire & Rubber Co. Mr. Crowe is succeeded as territory manager in southern Alabama and northwestern Florida by C. E. WILLIAMS.

. . . GEORGE H. FREERS, promoted by the directors of the Marmon-Herrington Co., Inc., to vice president in charge of engineering.

. . . LEO HOBAN, named sales manager of the Kerrick Steam Cleaner Division of the Clayton Mfg. Co., El Monte, Calif.

. . . EARL R. LIMB, who will direct all phases of sales activities in the southwestern United States for Willys-Overland Motors, Inc.

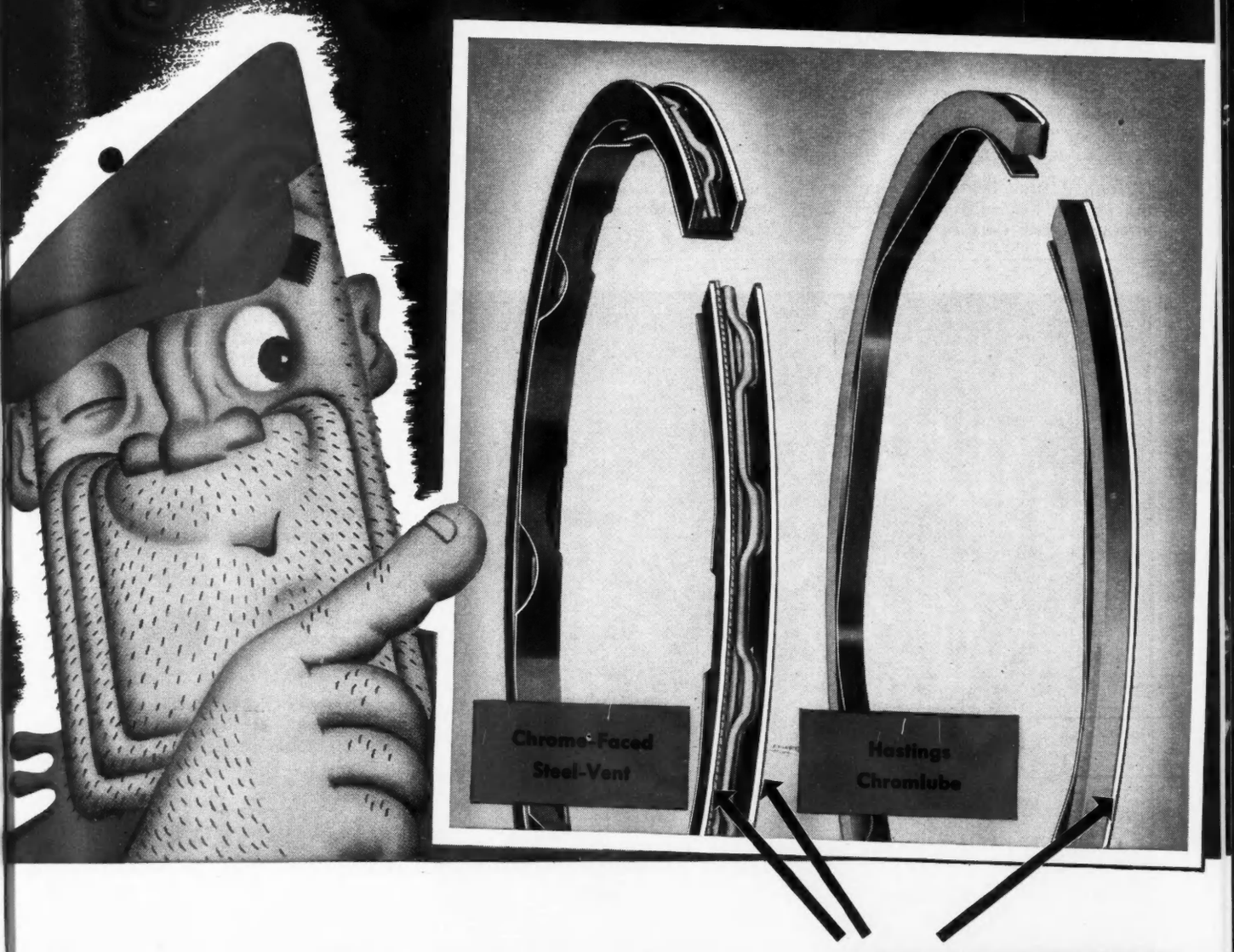
. . . DON RASMUSSEN, named as Western sales supervisor for Electric Welding Alloys Corp. HERMAN GREIF and DANIAL WETWORE advanced to regional managers; HUGH HURLEY and ROY WALDROP to assistant regional managers; DON GARRETT, LEE WADE, and ALEX FREDERICK to district managers. These men will now supervise the activities of the group of Eutectic district engineers in their various areas.

(TURN TO PAGE 98, PLEASE)

Bennett Fleetmeter cuts fueling costs two ways
Initial cost of the Bennett Fleetmeter is less, because it is free of the special equipment required on a pump used for resale of gasoline. Maintenance cost is kept to an absolute minimum by such exclusive construction features as the Bennett all-metal meter and Bennett's centerline assembly. For fast delivery, accurate accounting, convenient handling, and dependable performance, cost conscious fleets everywhere are choosing Bennett. Write for details. John Wood Company, Bennett Pump Division, Muskegon, Michigan.
BENNETT FLEETMETER
JOHN WOOD EST. 1867
MODEL 788 Standard Fleetmeter with Register and Totalizer only. (Also available with ticket printer—MODEL 789 —that "keeps books" on every gallon dispensed.)

HASTINGS HEAVY-DUTY SETS FOR TRUCKS AND TRACTORS

with CHROME-FACED OIL RINGS!

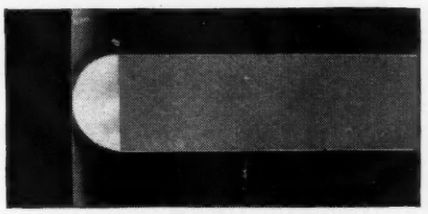


● More than four years of field testing have confirmed the Hastings principle of putting chrome where it is most needed—on the oil control rings.

Hastings heavy-duty Chrome Sets, with Chrome-Faced Steel-Vent and Chromlube oil rings, are out-performing all previously known ring combinations. They greatly increase expected piston ring life even under severe conditions.

Under any operating conditions, you'll get greater resistance to scuffing, less cylinder wall drag and longer life with Hastings Chrome Sets. Available now for nearly all trucks and tractors.

HASTINGS MANUFACTURING COMPANY • HASTINGS, MICHIGAN
Hastings Ltd., Toronto



Hairline Contact

The chrome-faced edge of Hastings steel segments is not flat, but round. This rounded edge gives a fine, hairline contact with cylinder wall—helps the ring seat properly with greatly reduced cylinder wall drag.

HASTINGS STEEL-VENT PISTON RINGS

CHROME-FACED FOR HEAVY-DUTY SERVICE

Introducing . . .

Continued from Page 96

. . . HOMER W. BOHN, appointed general agent in the sales department of the Geo. F. Alger Co.

. . . WALLACE C. MANVILLE, employed as resale representative for the Denver territory of A. Schrader's Son, Div. of Scovill Mfg. Co., Inc.

. . . JOHN M. DERR, JR., territory representative for The General Tire & Rubber Co. in central North Carolina.

. . . PERRY STRAUSS, formerly head of Perry's Auto Stores of Cleveland, now heads the newly formed Brucely Mfg. Corp., Culver City, Cal., as president and general manager.

. . . JOHN A. MENSTER, assistant manager of sales for the Welded Tube Div. of the Babcock & Wilcox Tube Co.

. . . DOROTHY KIMMEL, managing director of Lempco International Inc., Bedford, Ohio, who recently returned from a four months' trip through France, Italy, Switzerland, Austria, Greece, Turkey, Tunis, Algiers, Casablanca, Tangiers, Spain, and Portugal.

. . . M. W. KREEGER, one time service manager of Lempco Products, Inc., now vice president and general manager of Lempco Automotive. C. D. Burdette new advertising manager.

. . JAMES H. BARNES, employed by The Timken-Detroit Axle Co. as a member of the sales engineering department.

. . . HAROLD B. LELAND, named vice president of manufacturing of the Hood Rubber Co., Watertown, Mass., a division of the B. F. Goodrich Co.

. . . ROBERT W. MANEY, in charge of tire production at Plant 2 of The Goodyear Tire & Rubber Co. in Akron, Ohio, has been named plant manager of the company's plant in Los Angeles, Calif.

. . ARTHUR HULL-RYDE as sales manager of Wix Accessories Co., Gastonia, N. C., manufacturers of oil filters and filter cartridges.

. . . BYRON H. EVANS, Pittsburgh parts depot manager, for Ford Div., Ford Motor Co. Mr. Evans succeeds RALPH W. LEMMER who has been transferred to the West Coast.

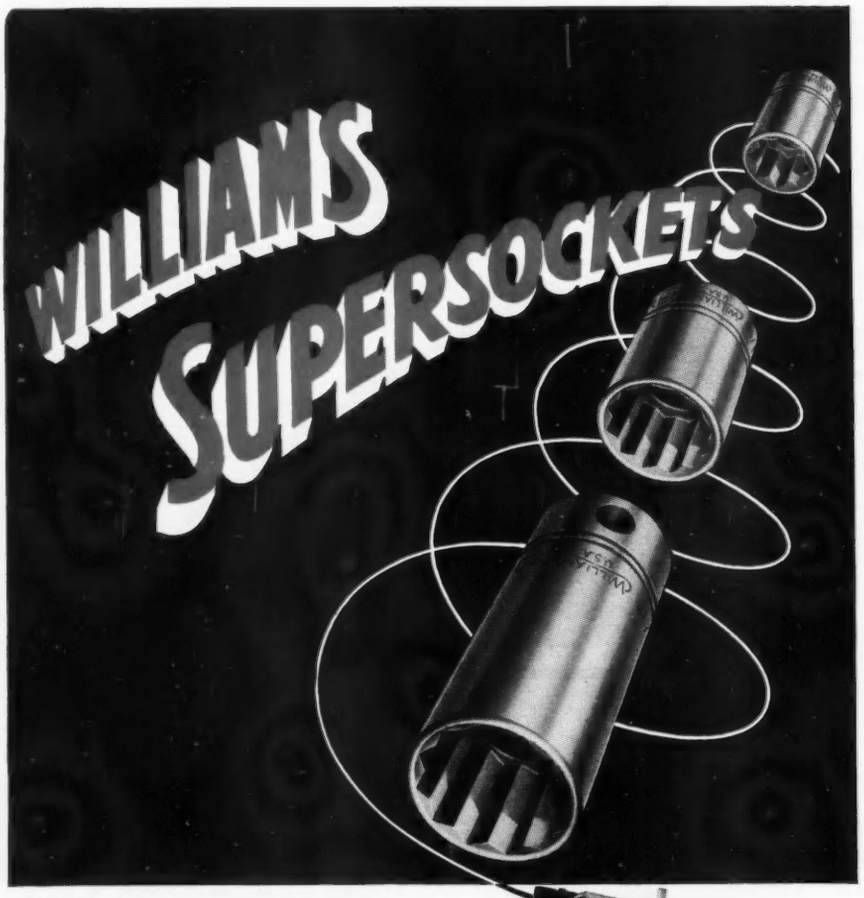
. . . E. W. STOCK, appointed service manager of the Highway Trailer Co., Edgerton, Wis.

. . . JOHN C. HOLLEY, left, vice president in charge of sales, and E. V. MOORE, right, vice president in charge of finance for the Holley Carburetor Co.

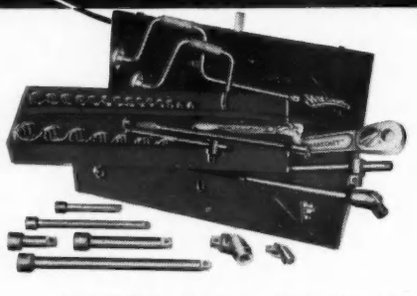
. . . WALTER I. BUCHANAN, named sales manager of the service parts division of Spicer Mfg. Div., of Dana Corp. DAVID F. KALISH, formerly sales manager, will continue with the company on field sales assignments.

. . . ROBERT A. BROWN, who has been service engineer at the Cincinnati factory service station, promoted to sales engineer in the Atlanta branch territory of the Black

(TURN TO PAGE 101, PLEASE)



WORLD'S MOST FLEXIBLE WRENCH SYSTEM The engineered flexibility of Williams "Supersockets" permits the combining of sockets, handles and accessories to create special wrenches for special jobs. Available in five different patterns, with drives ranging from 1/4" to 1" square, and with socket openings from 3/16" to 3-1/8". Write for Williams "Supersocket" Catalog A-50.



Set No. S-10 Complete in Metal Case, 36 Pieces
21 Sockets and 15 Attachments

WILLIAMS
• OUR DISTRIBUTOR IS YOUR LOCAL WAREHOUSE

OPEN END, BOX, ADJUSTABLE & RATCHET WRENCHES; DETACHABLE SOCKETS & SETS; IMPACT SOCKETS; TOOL HOLDERS; LATHE DOGS; "C" CLAMPS; CHAIN PIPE TONGS & VISES; FLANGE JACKS; PLIERS; SCREWDRIVERS; PUNCHES & CHISELS; SOFT FACED "NUPLAPLEX" TIPPED HAMMERS; HOIST HOOKS; EYE BOLTS; THUMB SCREWS AND NUTS; BODY AND FENDER REPAIR TOOLS.

J. H. WILLIAMS & CO., AUTOMOTIVE DIVISION, BUFFALO 7, N. Y.

Introducing . . .

Continued from Page 98

& Decker Mfg. Co., Towson, Md. GEORGE H. THALMAN, JR., will assume Mr. Brown's duties at Cincinnati. WM. F. DUNN, JR., formerly service engineer at the New Orleans branch, promoted to sales manager in that territory. GRADY R. FUNK, service engineer at Charlotte, transferred to fill Mr. Dunn's former position. ROBERT DAWSON, named sales engineer under the supervision of W. L. POYNTER, Kansas City Branch manager.

. . . JAMES A. SMITH, promoted to sales representative in north-central Ohio for the General Tire & Rubber Co.

. . . W. A. WRIGHT, promoted to regional manager of the World Bestos' Southeast Sales Region.

. . . L. J. BRADY, named manager of the St. Louis district of the Replacement Tire Sales Div. of The B. F. Goodrich Co.

. . . DAVID T. WOODHOUSE, manager of product development and methods of The Cleveland Chain & Mfg. Co., Cleveland, Ohio.

. . . PHILIP O. MULLANE, appointed district sales manager of The Southern Chain Mfg. Co., Birmingham, Ala.

. . . FURBER MARSHALL, left, newly elected president of the Dart Truck Co. suceeding E. H. FAHRENKROG who has returned to Chicago, and RALPH H. KRESS, right, as executive vice president.

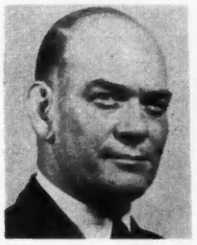
. . . Two new district sales representatives for Prest-O-Lite Battery Co. ROBERT L. HUBER, named to cover the New Jersey area and WILLIAM H. VAUGHT who will take charge of the Cincinnati area, covering southern Ohio and northern Kentucky.

. . . HAROLD J. HENRY, appointed vice president in charge of sales of Commercial Solvents Corp.

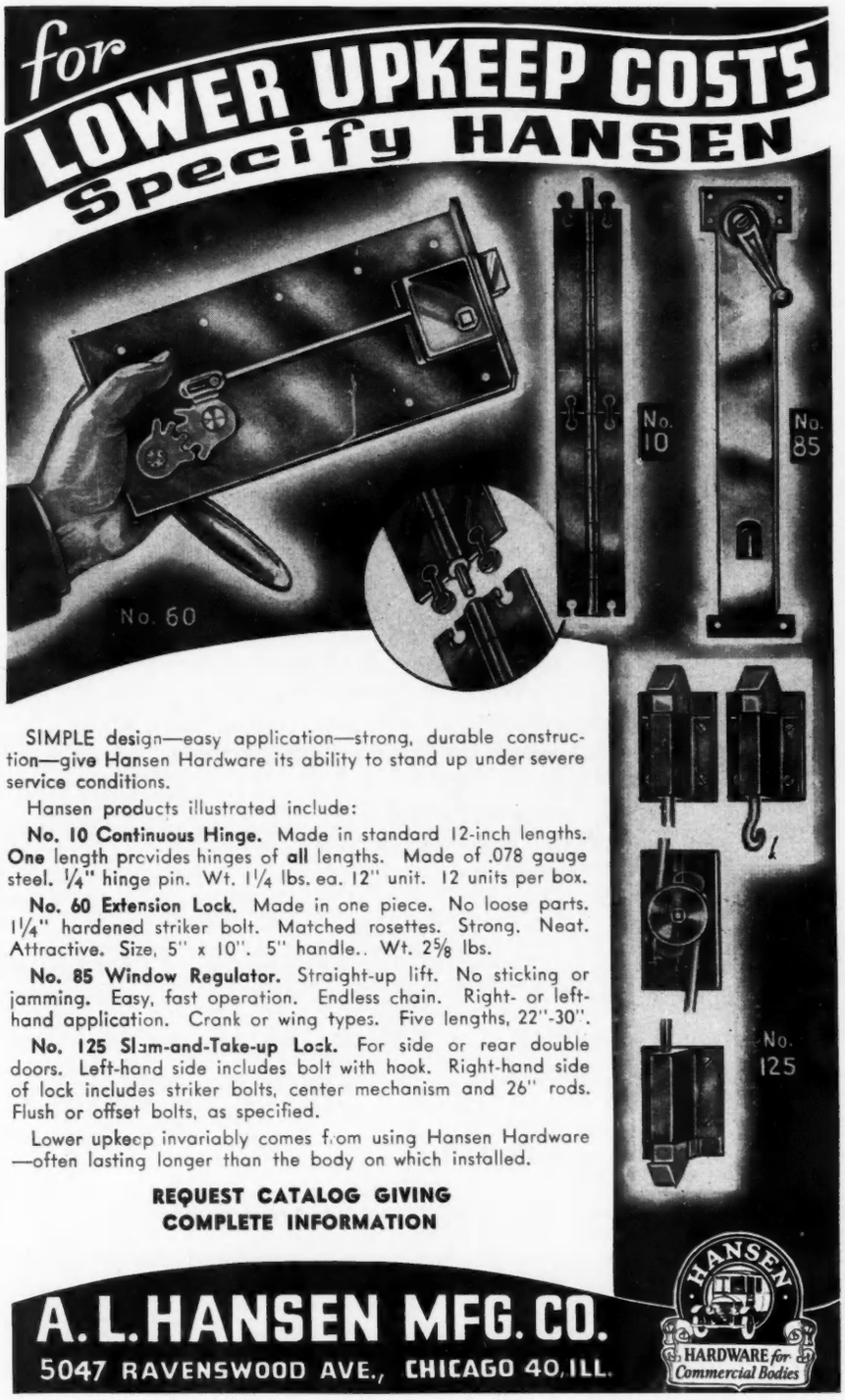
. . . R. C. STEIN, promoted to manager of molded goods sales at the St. Marys, O., Goodyear Tire and Rubber Co.'s plant. R. E. CHAPMAN, appointed manager of hose sales, Akron, succeeding R. W. SANBORN, who is now representing the Mechanical Goods Div. in the Akron territory.

. . . FRANK O. MAXWELL and A. CALDER MACKEY, elected to Board of Directors of the Plomb Tool Co., and J. G. ALLEN, appointed a vice president.

. . . PERRY DUNCAN, appointed manager of World Bestos' District 18, will supervise sales activities from Kansas City, Mo.



. . . LEWIS W. LAMMIMAN, left, named as technical service manager in the paint spray div. and JOHN W. COCHRUN, right, as equipment service manager of the DeVilbiss Co., Toledo, Ohio.



SIMPLE design—easy application—strong, durable construction—give Hansen Hardware its ability to stand up under severe service conditions.

Hansen products illustrated include:

No. 10 Continuous Hinge. Made in standard 12-inch lengths. One length provides hinges of all lengths. Made of .078 gauge steel. ¼" hinge pin. Wt. 1¼ lbs. ea. 12" unit. 12 units per box.

No. 60 Extension Lock. Made in one piece. No loose parts. 1¼" hardened striker bolt. Matched rosettes. Strong. Neat. Attractive. Size, 5" x 10". 5" handle.. Wt. 2⅝ lbs.

No. 85 Window Regulator. Straight-up lift. No sticking or jamming. Easy, fast operation. Endless chain. Right- or left-hand application. Crank or wing types. Five lengths, 22"-30".

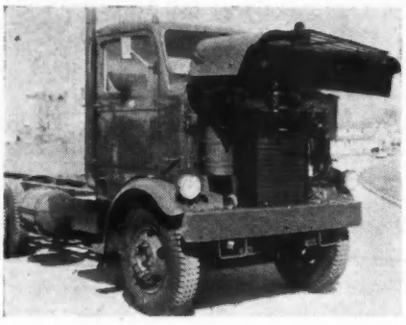
No. 125 Slam-and-Take-up Lock. For side or rear double doors. Left-hand side includes bolt with hook. Right-hand side of lock includes striker bolts, center mechanism and 26" rods. Flush or offset bolts, as specified.

Lower upkeep invariably comes from using Hansen Hardware —often lasting longer than the body on which installed.

REQUEST CATALOG GIVING COMPLETE INFORMATION

A. L. HANSEN MFG. CO.
5047 RAVENSWOOD AVE., CHICAGO 40, ILL.

HANSEN HARDWARE for Commercial Bodies



Hood raised on Model TG2105D showing accessibility to radiator, blower, air cleaner

Sterling Adds New C.O.E.'s

All-steel cab, adjustable steering wheel, power ventilation, wood-lined frame featured

A NEW "TG" line of full cab-over-engine models has been introduced by the Sterling Motors Corp. of Milwaukee, Wis. The new c.o.e. line supplements the "TE" series of cab-forward models previously introduced and features an all-steel cab, adjustable steering column and a power ventilating system. Like all Sterling models the line also incorporates a shock-absorbing wood-lined frame and all-bolted chassis construction.

The new "TG" chassis are available with single or tandem rear axles, multiple transmissions in vehicles of sufficient wheelbase and diesel engines ranging from 150 to 300 hp.

The c.o.e. series were developed primarily to meet operator needs where maximum loading space is required. The short overall length from the front bumper to the back of the cab permits a longer body or trailer to be used within a specified maximum total overall length. In addition the shorter wheelbases available result in a reduced turning radius and improved maneuverability.

Adjustable Steering Wheel

THE STEERING wheel is adjustable and enables the driver to lock the steering wheel angle in any one of four positions to suit his particular needs.

END

Vari-Speed

HANDY GOVERNOR

Characteristics and Advantages

1. Wide range of governed speeds without the necessity of any change in governor assembly.
2. Controlled light load speeds.
3. Sharp governor cut-off—minimum horsepower loss.
4. Low speed droop.
5. Final full load and no load factory calibration on air flow machine assures you accuracy and uniformity in production.
6. Simple to adjust.
7. Simple mechanical design—only one moving shaft.
8. Sturdy corrosion-free construction.
9. Stainless steel needle bearings that insure instant response.

NO OTHER VELOCITY GOVERNOR CAN GIVE YOU ALL THESE ADVANTAGES

KING-SEELEY CORPORATION

ANN ARBOR MICHIGAN

PLANTS IN ANN ARBOR GRAND RAPIDS YPSILANTI

"There's a little leak in the gas line!"

Lay-ups got you handcuffed?

MISTER, if that's you in the handcuffs above, Quaker State HD Oil will help you slip out of them.

To keep lay-up time at a minimum, keep *engine wear* at a minimum...with Quaker State HD Oil. Made from 100% pure Pennsylvania grade crude oil, it is refined with the most modern processing equipment and with technical skill unsurpassed in the industry. Quaker State HD Oil is compounded with chemical detergents of highest quality.

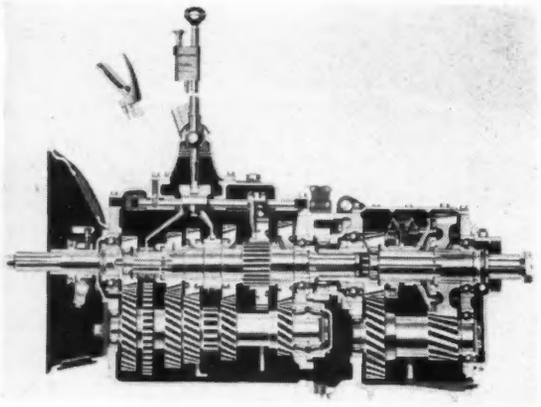
Even under toughest operating conditions, it keeps its body, lubricates thoroughly, protects every friction surface. It helps prevent formation of sludge, gum, or varnish —actually *cleans* as it lubricates!

There's no finer engine lubricant than Quaker State HD Oil. Change to it now!

QUAKER STATE HD OIL
AND SUPERFINE LUBRICANTS

Use Quaker State HD Oil for trucks, buses, taxis, tractors. Use Quaker State Motor Oil for passenger cars.

QUAKER STATE OIL REFINING CORPORATION, OIL CITY, PA.



Fuller Announces

Pre-selector button on lever of Roadranger enables driver to shift up or down automatically

A TEN-SPEED heavy-duty transmission with single lever control has been announced by the Fuller Mfg. Co., Kalamazoo, Mich. Known as the "Roadranger" it is essentially a two-range transmission having a five-speed front section combined with a two-speed—high and low range—auxiliary. Unique feature of this design is that the auxiliary is shifted automatically into the desired range whenever the front transmission is shifted into neutral, provided the driver signals a shift by pre-selecting the desired range before shifting the front section into neutral. Pre-selection is accomplished by the simple expedient of pushing or pulling a button attached to the gear shift lever.

From the standpoint of the driver, all shifts are made in conventional manner. However, when a change from one range to the other is desired in either direction the selector button is moved to pre-select the range just before the next shift is made.

In keeping with current trends in heavy-duty vehicle operation, the Roadranger has been designed to provide uniform and closely spaced steps between ratios so as to obtain maximum performance.

The vehicle can be operated at the governed engine speed through the entire range of 60 to 22 mph without shifting of the auxiliary. At this stage the speed of the auxiliary main shaft is the same as that of the front shaft.

If operating conditions indicate the need for shifting to low range, the speed of the auxiliary main shaft will become the speed of the front main shaft divided by the low-range reduction of 3.55 for each of the five speeds. The speed of the propeller shaft is always the same as the speed of the auxiliary main shaft.

Synchronizers are provided for both direct drive and main shaft low

CAN
You
Afford Anything Short of this Single-Source Ball Bearing Service?
Bearings are deep-seated components of motor vehicles . . . aren't quite as simple to replace as hub caps. That's another reason why it's false economy to use just any ordinary replacement bearings. They cost as much in time and labor to install as Ahlbergs—the bearings deservedly famous throughout the automotive maintenance industry since 1908—for peak precision, super smoothness and maximum life expectancy.
So . . . if you're looking for ways to squeeze more value out of your maintenance dollars . . . look into Ahlberg's line which includes ball bearings of all types for cars, trucks, busses and tractors. Write for catalog and application manual.
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Single Row
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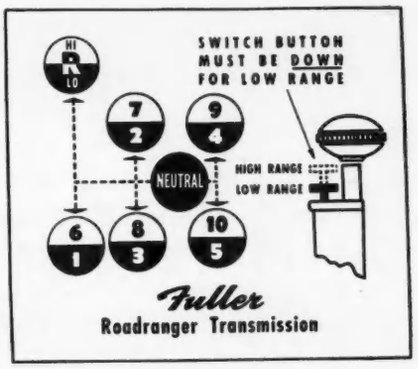
Snap Ring
Thrust
AHLBERG
BALL BEARINGS
AHLBERG BEARING COMPANY CHICAGO
AHLBERG
A Great Name in Automotive Replacement Bearings Since 1908

10-Speed, Single-Lever Shift



speed gear in the auxiliary. Pressure is applied to the selected synchronizer through a yoke mounted on a shift rod and actuated in either direction by a two-way power cylinder, using either compressed air or vacuum. The end of the cylinder to which power is applied is controlled by a solenoid-actuated valve, the solenoid being controlled by the button on the gear shift lever.

Since it is desirable to pre-select the auxiliary shift before starting to shift the front transmission to a faster or slower ratio, provision is made to prevent an auxiliary shift after pre-selection and before the front transmission is in neutral. This is done by breaking the electric connection from the battery to the switch by means of a micro-switch which remains open whenever the transmission is in gear and closed when in neutral.

It is apparent that shifts of the auxiliary from one range to another involve shifts from direct to a reduction of 3.55 to 1, or from 3.55 to 1 to direct drive. In shifting from low to direct in the auxiliary, the speed of the front unit main shaft is slowed down to the speed of the auxiliary main shaft because of the direct connection between the two shafts. Since the auxiliary main shaft is connected to the axle by the propeller shaft, the inertia of the entire vehicle is made available for slowing down the speed of the front main shaft when it is in neutral.

With a conventional transmission, shifts to a slower ratio make it necessary to speed up the slower gear relative to the main shaft by accelerating the engine with clutch engaged while the transmission is in neutral. With the Roadranger, on the other hand, partial synchronization in the front section is obtained by slowing down the front main shaft as described above. Actually since the ratio change in the auxiliary is greater than the entire range of the front transmission, the front main shaft is slowed down below the speed of the gear to be engaged in the front unit. Consequently, the shift in the front box has the characteristics of an up shift.

With a conventional transmission, shifts to a faster ratio require the faster gear to slow down while the transmission is in neutral. With the Roadranger, on the other hand, partial synchronization in the front sec-

(TURN TO PAGE 108, PLEASE)

A Sure Bet!

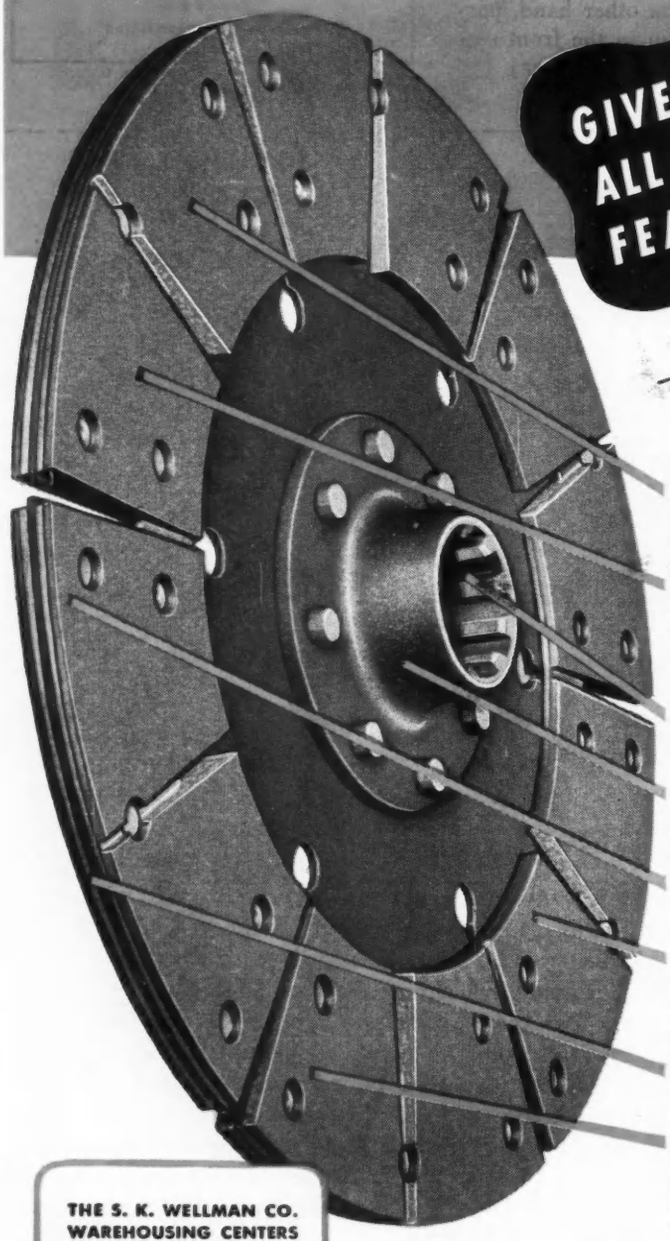
Here's one horse you can bet on every time, with complete assurance you're backing a winner. It's Thermoid's "Horse of a different color"—used to demonstrate Thermoid's Thermodized Pre-Stretching Process—*which checks fan belt failure before it starts.* A Thermodized Pre-Stretched Fan Belt was actually used to support the weight of a 1500 pound horse. Afterward, it was returned to service in the car from which it was borrowed *and it worked perfectly at the original adjustment, showing no permanent stretch had occurred.* For long life and completely dependable service under the most severe operation conditions, specify *Thermoid* when you're ordering fan belts. They're a sure bet—every time!

Thermoid

Brake Linings • Fan Belts • Radiator Hose • Hydraulic Brake Parts and Fluid • Clutch Facings • Car Mats • Thermoid Precision Process Equipment.

Thermoid Company • Trenton, N. J.

ONLY VELVETOUCH ALL-METAL CLUTCH PLATES



ADDED MILEAGE. Velvetouch lasts longer, requires fewer adjustments.

EXTRA SAFETY. Metal construction insures uniform friction . . . is little affected by extreme operating conditions.

EASY INSTALLATION. Precision machined to speed installation.

HEAVY DUTY HUB. Forged steel hub and spring steel plate cut expensive tear-outs.

LOW COST. Measured in added mileage, Velvetouch costs less.

NOT AFFECTED BY OIL OR GREASE. Unlike asbestos, oil and grease can't harm Velvetouch.

HEAVY DUTY BUILT. Friction is fused with solid steel backing.

RUNS COOLER. Asbestos won't conduct heat, but Velvetouch carries it away to protect opposing plate.

THE S. K. WELLMAN CO.
WAREHOUSING CENTERS

ATLANTA . 119 14th St., N. E.
BOSTON . 171 Brighton Ave.
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The S. K. Wellman Co., of Canada, Ltd. 2839 Dufferin St.

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Send For Literature Today

Velvetouch over 25 years of service 1924-1950

THE S. K. WELLMAN CO.
1374 East 51st Street • Cleveland 3, Ohio

Fuller Shift

Continued from Page 107

tion is obtained simply by speeding up the front main shaft as described. Again, since the ratio change in the auxiliary is greater than the entire range of the front unit, the front shaft is speeded faster than the gear to be engaged, hence, the shift in the front section has the characteristics of a down shift.

When the auxiliary section is shifted from 3.55 to 1 reduction to direct drive, the front section should also be shifted to a slower ratio. When shifting the auxiliary from direct drive to 3.55 to 1 reduction, the front section should also be shifted to a faster ratio. The corresponding shifts in the unit section should always be coincidental with auxiliary shifts unless an overall ratio change of 3.55 to 1 in either direction is required by the particular operating condition.

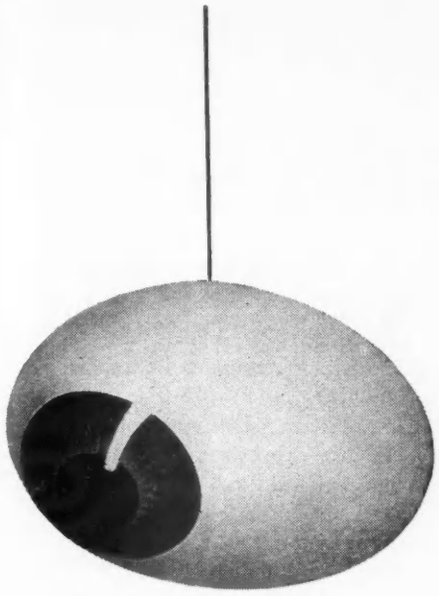
END

Truck-Trailer Production Up

Truck-trailer production in 1949 amounted to 33,097 units, a decrease of 26 per cent from 1948 when 44,478 units were turned out, according to the Bureau of the Census. Industry sources in Washington say that production during the first half of 1950 indicates a substantial increase for the current year.

Shipments last year amounted to 34,273 units valued at $119 million, a decrease of 27 per cent in number and 15 per cent in value from the 46,960 units, valued at $140 million, shipped during 1948. Vans accounted for considerably more than half of all truck-trailers shipped in 1949. Platforms represented about 20 per cent and tank trailers accounted for about 6 per cent of the total. The peak month was October with total shipments of 3,709 units.

"I fell asleep!"



Yes, keeping your fleet on schedule depends on *many* factors...and one of the most important is the *quality of the lubrication* your equipment gets. For lubrication is more than just "oils and greases"... it's also knowledge of your machines, the right lubricants to use for them, and how to use those lubricants to best advantage.

That's why you'll do better with Socony-Vacuum *Correct Lubrication.* It's a *complete* program of lubrication—designed specifically for your equipment and operating conditions to step up efficiency, cut down-time, reduce both maintenance and lubrication costs.

Why not enjoy *all* the benefits of *Correct Lubrication?* Call your Socony-Vacuum Representative today!

THAN CLOCK-WATCHING to RUN on TIME!

Here's Practical Help for Fleet Operators...

Socony-Vacuum gives you quality lubricants *plus...*

- Practical help on all maintenance problems.
- Individual, tested lubrication schedules.
- Advice on correct application of lubricants, and on proper handling and storing.
- One source of supply—available everywhere.
- Simplified inventory—with...

1. **DELVAC OILS**—for gasoline and automotive-Diesel engines.
2. **MOBILUBE GX**—multi-purpose gear lubricant for all enclosed gears — manually operated transmissions, transfer cases and drive axles.
3. **MOBILGREASE MP**—multi-purpose grease for chassis parts and engine accessories.

CORRECT LUBRICATION

SOCONY-VACUUM

for Fleet Operators

THE FLYING RED HORSE COMPANIES:

SOCONY-VACUUM OIL COMPANY, INC.
MAGNOLIA PETROLEUM COMPANY
GENERAL PETROLEUM CORPORATION

New ICC Leasing Rules Take Effect Sept. 18

Modified regulations deal with augmenting interchange, and rental to private carriers

AFTER 2½ YEARS' STUDY, the Interstate Commerce Commission has issued its rules governing leasing and interchange of equipment by motor carriers. Effective Sept. 18, 1950, the new rules do not go as far as had been urged in some quarters. The Commission found that drastic remedies were not necessary even if it had the power to impose them. For example, the rules do not prohibit trip leasing nor specify the manner of payment for leased equipment.

They consist of three principal parts: (1) Augmenting equipment; (2) interchange of equipment; and, (3) rental of equipment to private carriers and shippers.

The section on augmenting equipment calls for three copies of a written contract—one for the lessor, one for the lessee, and one to accompany the vehicle. During the term of the lease, the lessee must retain exclusive possession and control. The owner must furnish the lessee a receipt at time of possession and the procedure must be reversed when the vehicle is returned. The lessee must inspect the vehicle and complete an inspection form which must be retained.

Where vehicles are leased with drivers, the rules require drivers to be familiar with the ICC safety regulations and to furnish certification as to a physical examination. Trip manifests also are required.

On interchange of equipment, the rules require a lease, contract or agreement between common carriers for through movement of traffic. They must identify the equipment, specify point of interchange, and state the need for the use to be made of the equipment. Carriers must assign their drivers to operate over their routes.

There are only two rules affecting rental of equipment to private carriers and shippers. The first prohibits renting equipment with drivers, unless this service is authorized in the carrier's operating certificate. The other requires the removal of all

(TURN TO PAGE 114, PLEASE)

BODY WASHING IN LESS TIME

. . . with quick-acting Oakite Detergents

YOU get streak-free coach and truck surfaces in less time and with decidedly less effort when you use designed-for-the-job Oakite Body-Washing Detergents.

Effective detergent properties of Oakite Body-Washing Compounds thoroughly remove all grease and traffic film. Surfaces dry down clean . . . free of streaks . . . without chamoising.

An Oakite Technical Service Representative will gladly demonstrate! Write Oakite Products, Inc., 52G Thames St., New York 6, N. Y.

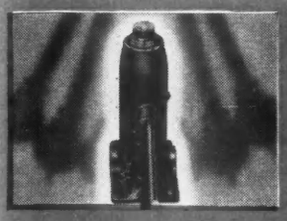
FREE BOOKLET!
Send for 36-page illustrated Booklet on Modern Oakite Cleaning for Service Shops.

Technical Service Representatives in Principal Cities of U. S. & Canada

OAKITE
TRADE MARK REG. U. S. PAT. OFF
SPECIALIZED INDUSTRIAL CLEANING
MATERIALS • METHODS • SERVICE

CHECK THESE IMPORTANT FEATURES WHEN YOU BUY PORTABLE HYDRAULICS

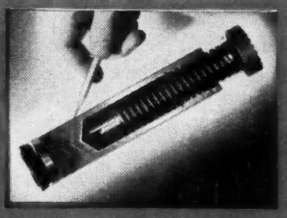
QUICK, EASY "POSITIONING"



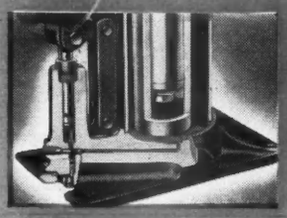
Walker "Series 900's" are designed to take an upright position automatically when lifted by the handle. The strong, malleable iron handle socket is located in the center of the jack and above the center of gravity. This famous Walker "Pendulum Balance" saves time and tempers when positioning the jack.

EXTRA RESISTANCE TO BENDING

To resist eccentric loads at top height, the lower end of the lifting ram in Walker "Series 900" is solid steel—not hollow as in some jacks. The Walker "Solid End" ram gives extra strength where extra strength is needed most—strength to resist the bending force from inevitable side thrusts.



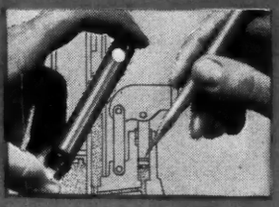
SMOOTH, DEPENDABLE LIFTING POWER



Efficient performance in any hydraulic jack depends upon internal valve action. In Walker "Series 900," suction and discharge valves work in perfect synchronization, at lightning speed. Closing action is always positive. This "Ryth-matic" valve action assures efficient, dependable operation.

LEAK-TIGHT HOLDING POWER

A jack must not only lift . . . it must also hold. If the alignment and fit of its parts is sloppy, jack fluid is bound to escape under the terrific operating pressures. In Walker "Series 900" vital parts are precision-machined to tolerances so close that load-holding ability is always assured.



You get them all with...

WALKER SERIES 900

PORTABLE HYDRAULIC JACKS

6 Models from 1½ to 20 Tons Capacity

2 Super-Power Jacks 30 and 50 Tons Capacity

GET IT FROM YOUR JOBBER

WALKER MANUFACTURING CO. OF WISCONSIN
Racine, Wisconsin

Walker Jacks, Lifts
Exhaust Silencers, Oil Filters

ICC Leasing Rules Effective Sept. 18

Continued from Page 112

carrier identification before the vehicle is rented.

There is no exemption for railroad-operated vehicles. Nor is there any relief from the provisions calling for written contracts in case of emergency. However, there are general provisions for exemption upon application to the ICC.

The complete text of the rules follows:

§ 207.3. **Augmenting equipment.** Other than equipment utilized in interchange service, as defined in § 207.4 authorized carriers may perform authorized transportation in or with equipment which they do not own only under the following conditions:

(a) The contract, lease, or other arrangement for the use of such equipment

(1) Shall be made between the authorized carrier and the owner of the equipment;

(2) Shall be in writing and signed by the parties thereto, or their regular employees or agents duly authorized to act for them;

(3) Shall provide for the exclusive possession, control, and use of the equipment by the authorized carrier when operated by or for such carrier and for the complete assumption on the part of such authorized carrier of full responsibility in respect of said equipment during the period the equipment is operated in its service, to the public, the shippers, and the Interstate Commerce Commission;

(4) Shall specify the time and date the contract, lease, and other arrangement begins, and the time or the circumstances on which it ends, and the method of determining the compensation for the use of the equipment.

The duration of the contract, lease, or other arrangement shall coincide with the time for the giving and receiving of receipts for the equipment as required by § 207.3(b); and

(5) Shall be executed in triplicate; the original shall be retained by the authorized carrier, one copy shall be retained by the owner of the equipment, and one copy shall be carried on the equipment specified therein during the entire period of the contract, lease, or other arrangement, unless a certificate as provided in Rule 2-d(3), is carried in lieu thereof.

(b) **Receipts.** When possession of the equipment is taken by the authorized carrier or its regular employee or agent duly authorized to act for it said carrier, employee, or agent shall give to the owner of the equipment or the owner's employee or agent a receipt specifically identifying the equipment and stating the date and the time of day possession thereof is taken; and when the possession by the authorized carrier ends, it or its employee or agent shall obtain from the owner of the equipment or its regular employee or agent duly authorized to act for it a receipt specifically identifying the equipment, and stating therein the date and the time of day possession thereof is taken.

(c) **Inspection of equipment.** It shall be the duty of the authorized carrier, before taking possession of equipment, to inspect the same or to have the same inspected by one of its responsible and competent regular employees in order to insure that the said equipment complies with Parts 3 and 6 of the Motor Carrier Safety Regulations (Rev.), pertaining to "Parts and Accessories Necessary for Safe Operation," and "Inspection and Maintenance," and if explosives or other dangerous articles are to be transported thereon, further to inspect and check such vehicles or equipment to insure that they or it complies with Part 7 of the said safety regulations pertaining to "safe transportation of explosives."

The person making the inspection shall certify the results thereof on a report in the form hereinafter set forth, which report shall be retained and preserved by the authorized carrier, and if his inspection discloses that the equipment does not comply with the requirements of the said safety regulations, possession thereof shall not be taken.

In all instances in which the inspection required by this rule is made by an employee, the authorized carrier, if an individual, or a member of the copartnership if the authorized carrier is a copartnership, or one of the officials thereof if the authorized carrier is a corporation, shall certify on the inspection report that the employee who made the inspection is a responsible and competent employee:

(d) **Identification of equipment.** The authorized carrier acquiring the use of equipment under this rule shall properly and correctly identify such equipment as operated by it when such equipment is operated by or for such carrier in accordance with the

(TURN TO PAGE 116, PLEASE)

REPORT OF VEHICLE INSPECTION

Description of vehicle: Make.....Year....Model.....Serial No....
Type: Tractor..... ..Trailer.....Semitrailer.....
License plate: No.....State.....
Owner's name.....
Name of authorized carrier.....

Indicate in the proper column the result of the inspection of each item listed:

Item	Not Defective	Defective	Description of Defect
Body			
Brakes			
Cooling system			
Drive line			
Emergency equipment			
Engine			
Exhaust			
Fuel System			
Glass			
Horn			
Leaks			
Lights (state which)			
Reflectors			
Speedometer			
Springs			
Steering			
Tires			
Wheels			
Windshield wiper			
Any other items requiring attention:			

I hereby certify that on the ___ day of _____, I carefully inspected the equipment described above and that this is a true and correct report of the result of such inspection.

(Signature of person making inspection.)

I hereby certify that on the date stated above the person who made the inspection covered by this report is a responsible and competent regular employee.

Date _____

(Signature of authorized carrier or copartner or officer of authorized carrier.)

Sample of form required for inspection certification before taking possession

Real stoppers, these!

Big and bright, they're perfect for emergency vehicles . . . fire apparatus, police cars, snowplows. Like all Arrow *safety after dark* equipment, they're dependable . . . built for long, trouble-free performance.

Reflecting surfaces are plated and highly polished. Rims and bases are finished with baked-on enamel over bonderized steel. Effective lens diameter is 6⅛"; lettering is ⅜" x 2". 21 candlepower bulbs furnished with all models. Lenses are available in red, amber and blue, with or without the word STOP.

See your jobber salesman today about Arrow Emergency Lights and Arrow's complete line of lighting equipment . . . headlights, marker lights, directional signals, reflectors, mirrors and flares.

safety after dark

ARROW SAFETY DEVICE CO.
MOUNT HOLLY, NEW JERSEY

ARROW

Clear snow faster— at half the usual cost

● Operators in increasing numbers tell us that Marmon-Herrington *All-Wheel-Drive* Fords are the fastest snow-removal trucks your money can buy—yet they cost you less than any other multiple-wheel-drive trucks on the market.

The pictures above show Marmon-Herrington *All-Wheel-Drive* Ford Trucks clearing deeply drifted roads in northern Wisconsin and Minnesota. Here are typical owner comments: ***Truck has amazing power and traction—Plows deep, heavy snow with no effort at all—Makes more trips a day than the heavier all-wheel-drive it is working with—Does same work as a 10-ton all-wheel-drive in gravel hauling—Recommend it to any highway department for snow removal and all-around work.***

Marmon-Herrington offers the widest range of *All-Wheel-Drive* Ford models—95, 100, 110 and 145 hp. engines—a model of the right size and capacity for every snow-removal requirement. Let your Marmon-Herrington dealer show you the model that's exactly right for your local needs.

MARMON-HERRINGTON COMPANY, INC.
1521 W. Washington St., Indianapolis 7, Indiana

SERVICE AVAILABLE AT FORD DEALERS EVERYWHERE . . .

AUTHORIZED Ford SERVICE

Marmon-Herrington *All-Wheel-Drive* Fords are, for the most part, built of standard Ford Parts. Consequently, fast, efficient, low-cost maintenance and repair service is available at Ford dealers everywhere. When, occasionally, special parts are required, they are quickly obtainable through Marmon-Herrington distributors, conveniently located in principal cities the world over.

MARMON-HERRINGTON All-Wheel-Drive FORDS

ICC Leasing Rules

Continued from Page 114

Commission's requirements in Ex Parte No. MC-41.

If a removable device is used to identify the authorized carrier as the operating carrier, such device shall be on durable material such as wood, plastic, or metal, and bear a serial number in the authorized carrier's own series so as to keep proper record of each of the identification devices in use.

(1) The authorized carrier operating equipment under these rules shall remove any legend, showing it as the operating carrier, displayed on such equipment, and shall remove any removable device showing it as the operating carrier, before relinquishing possession of the equipment.

(2) Unless a copy of the lease, contract, or other arrangement is carried on the equipment, as provided in § 207.3(a)(6), the authorized carrier or his regular employee or duly authorized agent shall prepare a statement certifying that the equipment is being operated by it, which shall specify the name of the owner, the date of the lease, contract, or other arrangement, the period thereof, and any restrictions therein relative to the commodities to be transported, which certificate shall be carried with the equipment while such equipment is being operated by or for such carrier.

(c) **Driver of equipment.** Before any person other than a regular employee of the authorized carrier is assigned to drive equipment operated under these rules, it shall be the duty of the authorized carrier to make certain that such driver is familiar with and that his employment as a driver will not result in violation of any provision of Parts 2, 3, 5 and 6 of the Motor Carrier Safety Regulations (Rev.) pertaining to "Driving of Motor Vehicles," "Parts and Accessories Necessary for Safe Operation," "Hours of Service of Drivers," and "Inspection and Maintenance"; and to require such driver to furnish a certificate of physical examination in accordance with Part 1 of the Motor Carrier Safety Regulations (Rev.) pertaining to "Qualifications of Drivers," or, in lieu thereof, a photostatic copy of the original certificate of physical examination, which shall be retained in the authorized carrier's file.

(f) **Record of use of equipment.** The authorized carrier utilizing equipment operated under these rules shall prepare and keep a manifest covering each trip for which the equipment is used in its service, containing the name and address of the owner of such equipment, the make, model, year, serial number, and the State registration number of the equipment, and the name and address of the driver operating the equipment, point of origin, the time and date of departure, the point of final destination, and the authorized carrier's serial number of any identification device affixed to the equipment.

During the time that equipment subject to these rules is operated there shall be carried with the equipment, bills of lading, waybills, freight bills, manifests, or other papers identifying the lading, which shall clearly indicate that the transportation of the property carried is under the responsibility of the authorized carrier, which papers, together with the truck manifest, shall be preserved by the authorized carrier.

§ 207.4. **Interchange of equipment.** Common carriers of property may be agreement, contract, or lease, interchange any equipment defined in § 207.2(b), with other common carriers of property in connection with any through movement of traffic, under the following conditions:

(a) **Agreement providing for interchange.** The contract, lease, or other arrangement shall be made between the carrier which owns the equipment and the carrier proposing to acquire the use thereof shall specifically describe the equipment to be interchanged, the specific points of interchange, and the use to be made of equipment by the carrier which is not the owner thereof while in its possession; shall state the consideration for the use of the equipment; and shall be signed by the parties to the contract, lease, or agreement, or their regular employees or agents duly authorized to act for them.

(b) **Authority of carriers participating in interchange.** The certificates of public convenience and necessity held by the carriers participating in the interchange arrangement must authorize the transportation of the commodities proposed to be transpored in the through movement, and service from and to the point where the physical interchange occurs.

(c) **Driver of interchanged equipment.** Each carrier must assign its own driver to operate the equipment that is proposed to be operated from and to the point of interchange and over the route or routes authorized in the participating carriers' respective certificates of public convenience and necessity.

(d) **Through bills of lading.** The interlined traffic transported must move on through bills of lading issued by the originating carrier, and the rates charged and revenues collected must be accounted for in the same manner as if there had been no interchange of equipment.

Charges for the use of the equipment shall be kept separate and distinct from divisions of the joint rates or the proportions accruing to the carriers by the application of local or proportional rates.

(e) **Inspection of equipment.** It shall be the duty of the carrier acquiring the use of equipment in interchange to inspect such equipment, or to have it inspected by one of its responsible and competent employees for the purposes specified in § 207.3(e), and equipment which does not meet the requirements of the safety regulations shall not be operated in the respective services of the interchange carriers until the defects have been corrected.

§ 207.5. **Rental of equipment to private carriers and shippers.** (a) **Renting equipment with drivers.** Unless such service is specified in their operating authorities, authorized carriers are prohibited from renting equipment with drivers to non-carriers, and shall not directly or indirectly assist such non-carriers to select or obtain drivers for equipment rented to them.

(b) **Removal of identification.** Before the effective date of the lease, contract, or agreement for rental of equipment to non-carriers without drivers, the authorized carrier shall cause to be removed from the equipment all marks of identification that indicate that such equipment is utilized in its operation; which marks shall not be restored until the termination of the agreement.

§ 207.6. **Modification of or exemption from rules.** Any of these rules may be modified, or any carrier may be granted exemption from any rule or rules, in the discretion of the Commission, and upon good cause shown, under the following conditions:

(a) **Application for modification or exemption.** Application for modification of or exemption from a rule shall be made in writing, addressed to the Interstate Commerce Commission, Washington, D. C., and signed by the carrier seeking the modification or exemption, or a regular employee or agent duly authorized to act for him, and shall specify the rule sought to be modified, or the rule from which exemption is sought, and the reasons therefor.

(b) **Notice of filing application.** A copy of such application shall be sent by the applicant to competitors known to it, through the United States mails, and certification of such mailing shall be made by the applicant and attached to the application filed with the Commission.

(c) **Reply to application for modification or exemption.** Competitors of the applicant shall have 15 days from the date of such notice in which to file replies to said application.

END

OUT OUR WAY
OWOOH! FOR NINE YEARS HE'S BEEN STANDIN' ON SOL-SPEEDI-DRI AN' HE DON'T KNOW WHAT IT'S FOR!
BECAUSE IT'S NONE OF MY BUSINESS! THEY GOT MEN DOIN' THAT.
WHY IS IT SOME PEOPLE HAVE GOTTA BREAK A LEG OR ARM OR SUMPIN' BEFORE THEY BOTHER TO FIND OUT ABOUT SOL-SPEEDI-DRI?
THE HERMIT
J.R.WILLIAMS
Promote Safety, Speed Up Work
BY USING
SOL-SPEEDI-DRI
Spread SOL-SPEEDI-DRI on the floor. It soaks up all liquids—oil and grease included. Floors are safe for working, safe for walking... and safe working conditions help speed jobs through. SOL-SPEEDI-DRI cuts floor-cleaning costs and helps reduce fire hazards, too. Clip the coupon, send it today ...see for yourself what an important job SOL-SPEEDI-DRI can do for you!
Warehouse stocks maintained in principal cities of the United States and Canada.
Inquirers in New York, New England, and New Jersey should write to Speedi-Dri Corp. Elsewhere in U.S. to Waverly Petroleum Products Co., 1724 Chestnut St., Phila. 3, Pa.
SPEEDI-DRI CORP., 1 Wall Street, New York 5, N.Y.
WHEN YOU BUY, BE SURE IT'S
SOL-SPEEDI-DRI
Reg. U.S. Pat. Off.
OIL & GREASE ABSORBENT
FREE SAMPLE:
Fill out the coupon and mail today for big, free sample.
Name
Address
City
State

Roll-Off Body Cuts Costs

Continued from Page 69

age of chassis and spare bodies in a low-ceiling basement. This would have been impossible with the conventional body and chassis combination. This type body, further, completely eliminated the need of large space-consuming loading ramp areas, and permitted the combining of preparation for delivery and the loading into the bodies of planned loads in one central point at a convenient location in the warehouse.

Body Is Part of Operation

THIS whole warehouse, preparation and delivery function follows very carefully the following planned cycle of operations, keyed around the roll-off body principle. All deliveries of sales from the five stores are made from the one nine-story warehouse in Manhattan.

Each item must, prior to delivery, be routed through the preparation area where it is cleaned, polished and fully inspected. From preparation for shipment it moves into the loading area. These areas are right alongside of each other on the third floor of the nine-story warehouse.

In the loading area, each item is spotted in a definite bin, which represents a very carefully pre-planned load for the following day's delicery. Deliveries to specific areas—such as North Jersey, Long Island, etc.—are made only on those days on which full body loads are accumulated. No truck leaves the warehouse without a full load. Past experience has shown that these days occur with a certain degree of regularity and delivery promises at the time of sale of the article are made on this basis.

FIG. 7. Rear view of roll-off chassis Arrows point to anti-side-sway guides

As the trucks return from their day's run, the driver and helper back the truck up to the elevator, roll the body off on to the elevator, place it on the third floor, as shown in the accompanying illustrations. The chassis then is stored in the basement.

At 6 p.m., crews of experienced loaders take over and begin loading the empty bodies, which keep coming in throughout the evening off their daily run. The bodies are carefully loaded from the accumulation bins. As many as eight bodies are loaded at one time in half the space required by loading ramps, and with much less confusion. They are loaded in such a way that items for each stop along the route can be unloaded in an orderly way; early stops from side doors on either side of the body and later stops from the rear doors.

Loaded bodies remain in this third floor preparation and accumulation area until all accumulated loads are in the bodies. They are then lowered on the elevator to the street floor, where the same loading crews mount the

(TURN TO PAGE 122, PLEASE)

Engineered to serve better, to last longer, and to reduce service cost, Niehoff Warranteed Ignition will prove a profitable investment for any truck operator.

Every part is designed and engineered to assure quick, easy installation, and packaged to protect and quickly identify the part.

A national network of Niehoff Jobbers is waiting to supply you. See Your Jobber Today.

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NIEHOFF *The Best in Ignition*

Roll-Off Body

Continued from Page 121

bodies on the proper chasses. Each chassis is then carefully parked bumper to bumper, in an absolute minimum of space, where they stand ready for the driver to start deliveries in the morning without any undue delays.

Design Features

THE design and handling of the roll-off body is as simple and orderly as the loading procedure. The basic part on the chassis is a standard steel channel, mounted on wood sills on top of the main chassis rails, with the flanges turned up to form a track, as shown in Fig. 4. Six wheels, three each side, are mounted on the bottom of the body. They roll in these tracks during the roll-on and roll-off operations.

There are very simple stops at the front ends of these tracks to stop the body in it's proper position, as shown in Fig. 5. A pin-type safety catch also is provided on each track as shown in Fig. 6.

At the rear end, on each side, there is a simple quick-action, hook-type tie-down bar, shown in Fig. 1, which is drawn tightly with an ordinary nut and wrench by the mounting crew. This can be seen in a disengaged position in Fig. 1. For ease of mounting, the rear lip of the track is flared. This can be seen in both Figs. 1 and 7.

In addition to the front-end stop, safety catch, and tie-down bar, a U-shaped guide is provided on each side of the track, at the center, as shown in Fig. 7. This guide is engaged, when the body is mounted, by a simple coupler on the body. It's function is to prevent side sway. There also is a full-length guide on the outside of each of the main tracks to prevent the body casters from swiveling while the truck is in motion, as shown in Fig. 6.

The body itself is in every detail quite conventional in design, having double doors on each side with a rather large tailboard and curtains at the rear. Normal cross bars are used, but in place of the conventional longitudinal sills, four angles, two each side, are used. They are spaced about 3 in. apart to suspend the six roll-off wheels between them. Each of the wheels has it's own axle and roller bearings.

Just outside of these angles eight swivel casters, four each side of the body, are mounted simply by bolting through the wood floor. These casters are ball-bearing mounted and, with the wheels, are Alemite-fitted. They are greased twice a year. This greasing operation represents the only maintenance required on the body.

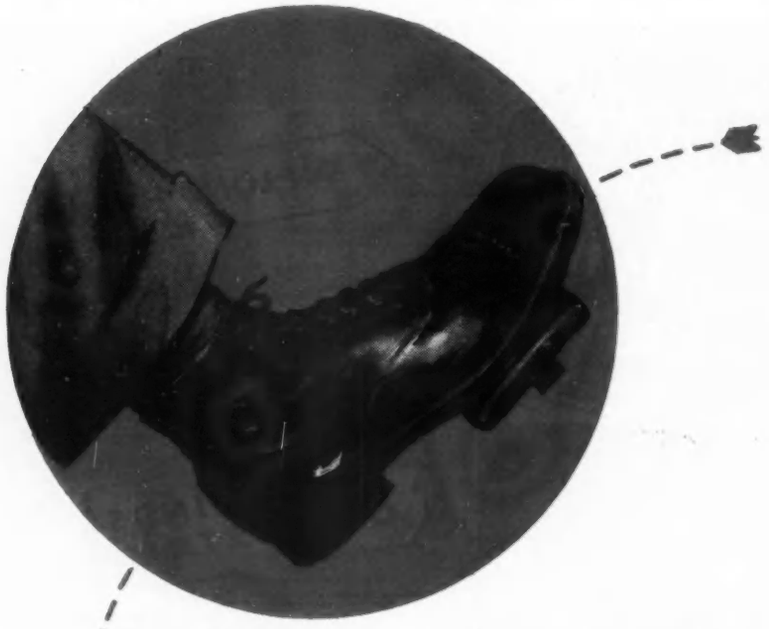
Two men can move the empty body with ease on and off the elevator and around the loading area. Four men roll the loaded body onto the chassis and tie it down in about five minutes. To further facilitate roll-off from the chassis, front wheel chuck blocks are provided to give the chassis rails a slight downward pitch, as shown in Fig. 8. In addition, a stop mark is painted on the elevator door opening to indicate the correct elevator position, as shown in Fig. 2.

Economic Advantages

BY THE use of this roll-off body system, Spear's has not only effectively solved its space problems but also has developed a very smooth-flowing, efficient materials handling system from which it has benefited by cost reductions in the delivery functions. In addition, Spear's is constantly enjoying many other cost saving benefits.

By the effective use of spare bodies during peak seasonal periods, Spear's can keep the various chasses running additional shifts. This means that while

(TURN TO PAGE 124, PLEASE)



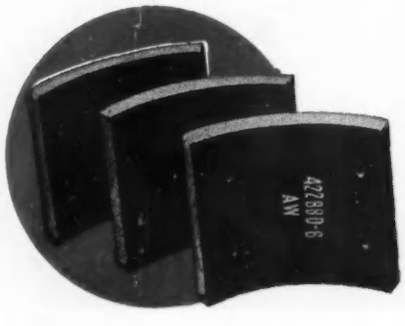
Put Your Foot Down on Costs

Thermoid Heavy Duty Brake Blocks provide maximum "safe stopping" at minimum cost per mile.

They stand up under high operating temperatures. Even when worn thin, they give full brake action. They won't score or wear brake drums.

Thermoid Heavy Duty Brake Blocks work smoothly, quietly, reliably. Wet or slushy weather won't affect their efficiency.

More and more leading fleets are relying on Thermoid Heavy Duty Brake Blocks for sure, safe stopping that ups fleet efficiency. Ask your Thermoid Distributor or Fleet Specialist to show you how you too can reduce operating costs.



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Brake Linings • Fan Belts • Radiator Hose • Hydraulic Brake Parts and Fluid • Car Mats • Clutch Facings • Thermoid Precision Process Equipment

Thermoid Company • Trenton, N. J.

3 GREAT MOHAWK TRUCK TIRES

SUPER CHIEF
TRUCK
An extra tread, heavy-duty truck tire for extremely long mileage. Vented shoulders reduce heat, insure longer wear.

BIG CHIEF
TRUCK
Ruggedly designed for grueling special service—excavating, logging and mining operations, either on or off the road.

CHIEF
BUS-TRUCK
Outstanding in quality throughout the country for safety, service and economy—the tire for the tough jobs.

"You get more miles on Mohawks!

Their outstanding quality has been famous among fleet operators everywhere—for over 37 years! Yes, for every truck and bus tire requirement, you can rely on Mohawks for miles and miles of extra service!"

MOHAWK

THE MOHAWK RUBBER COMPANY · AKRON 5, OHIO
Export Department — 1819 Broadway, New York 23, N. Y.

Roll-Off Body

Continued from Page 122

one body load is being delivered, another body is being loaded and made ready to take out when the chassis returns. This, of course, saves the costly investment in extra chasses to meet seasonal peak requirements.

Moreover, practically all overhauls and repairs to the chasses can be made at night while the bodies are being loaded. This certainly is a very definite advantage because the chasses are always available and ready for service in the morning.

The always undesirable need of driver and helper loading does not exist. All loads are handled by experienced loaders, assuring more careful loading, little or no damage, and a full day's time for the driver to make deliveries.

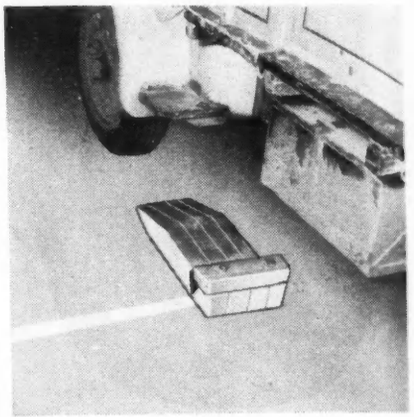
One extra handling operation from preparation for shipment to a loading dock is completely eliminated. This means very definite savings in labor, time, and possible damage. Also, a like amount of warehouse space is saved by the need for only one accumulation area on the third floor.

By employing a few open side platform type bodies, furniture can be picked up at the freight terminals and quickly spotted into it's proper warehouse location.

The roll-off type body, being tied-in as it is with other related warehouse functions and material handling operations, should be of very definite interest to other companies in similar lines of business and with like problems, as well as to many manufacturing companies who have the problem of material or product movement from plant to warehouse or for distribution to, or movement between, various warehouses.

END

Please resume your reading on P. 70



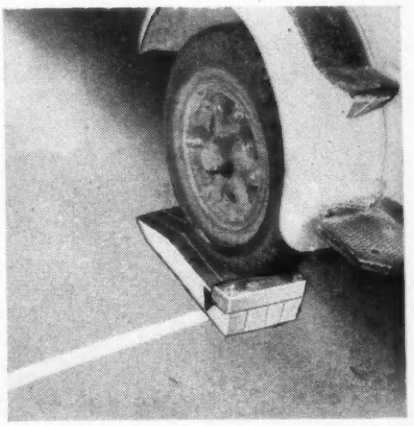


FIG. 8. To further facilitate roll-off of the body from the chassis, two chuck blocks are used to give the rails a slight downward pitch. Upper view shows black arrowhead on block centered on white guide line before backing. Lower illustration shows wheel on the block as body rolls off. Body is not pushed off. Chuck blocks, plus sudden application of brakes, accomplishes the job

"Cleveland"

SPECIALIZED STOCK FORGINGS

AND

QUALITY BODY HARDWARE

2448 B

2485 AA

2491 D

2408½

2407 A

2801 A

A COMPLETE LINE of truck, bus and trailer hardware, drop-forged body irons and fittings designed to give dependable service year after year.

Where attractiveness and ability to stand up under severe punishment are required, the custom and production builders of commercial bodies insist upon "CLEVELAND" products.

CLEVELAND PRODUCTS ILLUSTRATED

#2449-B—BINDING HOOK
5" overall, 9/16" round.

#2485-AA HEAVY CORNER IRON
For the heaviest trucks.

#2491-D CORNER IRON
Lighter pattern, from 12 to 24" high.

#2408½ GRAB HOOK
Suitable for ¼" to ⅝" chain.

#2407-A END GATE CHAIN HOOK
Furnished in most sizes.

#2801-A HEAVY DUTY TOWING HOOK
Also furnished in lighter pattern.

ESTIMATES FURNISHED

on your Special Automotive Forgings or Die Castings to blueprint.

THE CLEVELAND HARDWARE and FORGING COMPANY

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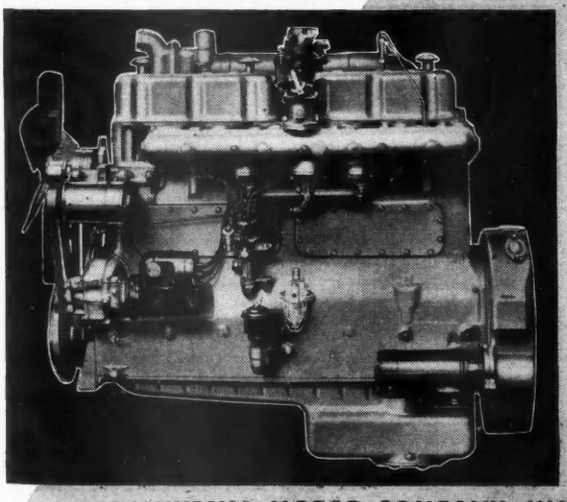
WAUKESHA powers the pumpers!

OREN

WAUKESHA 145-GKB HIGH OUTPUT FIRE ENGINE SPECIAL
Six cylinders, 5¼-in. bore x 6-in. stroke, 779 cu. in. displ., 240 hp. at 2400 rpm.



● "The South's Only Fire Truck Manufacturer"—Oren Roanoke Corp. of Roanoke, Virginia—builds in protection and performance *with power*. Waukesha power!

This powerful pumper—an Oren Model 1600/1000—is now an important part of the fire fighting facilities of Ludlow, Mass. It's a custom-built, triple combination, 1000 gpm. @ 150 lb. pumper—completely modern from its Hale Midship Mounted Centrifugal Pumps to its Waukesha 145-GKB High Output Fire Engine Special power plant developing 240 hp. at 2400 rpm.

It's a six-cylinder, valve-in-head type engine with every wanted feature for fire engines—fully counterbalanced 3½-inch 7-bearing crankshaft • twin ignition • torsional vibration dampner • down draft carburetion • crankcase ventilation • overhead valves with Stellite seats • removable wet sleeve cylinders • aluminum pistons. And it's arranged for full electrical equipment and all modern accessories.

Send for Bulletin 1402.

WAUKESHA MOTOR COMPANY, WAUKESHA, WIS., NEW YORK, TULSA, LOS ANGELES

WAUKESHA ENGINES

Three New Mack Engines Power the A Line

Continued from Page 72

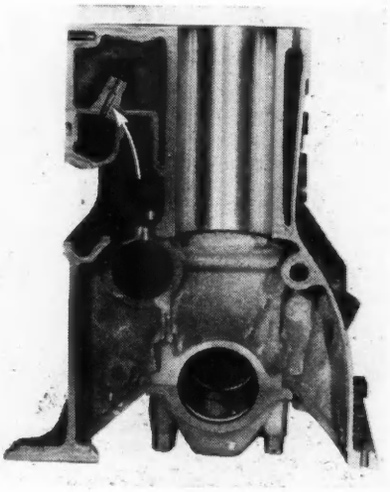
of heat-resistant aluminum iron. Three-piece slip joint construction permits expansion without the setting up of stresses.

Exhaust valve seat inserts are of Niferrite alloy, and valve lifters incorporate a positive rotating mechanism which adds to their life span. Exhaust valves are sodium cooled. To reduce distortion and cylinder head warping cylinder head studs have been increased in number to 32. Tapped bosses are provided on the cylinder head for mounting of accessories.

Engine Specifications

Model	Cu In. Displ.	Bore and Stroke	Torque	HP	Governed Speed	Comp Ratio
A-20	290	3¾ x 4⅜	232 at 1400	107	1800	6.7 to 1
A-30	330	4 x 4⅜	264 at 1400	...	1800	6.7 to 1
A-40	337	4 x 5	302 at 1400	...	1800	6.7 to 1

Case-hardened timing gears, one-piece cylinder head construction, improved spark plug positioning typifies the line. Connecting rods are of angle split type providing greater strength and stiffness, and the case-hardened crankshafts with seven bearings and 12 integrally-forged counterweights add smoothness to all engines.



Improved valve cooling is achieved through a system of jet-directed water flow to each of the exhaust valve seat inserts individually

END

Please resume your reading on P. 73

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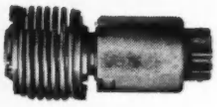
INSTALL THIS DRIVE



RETURN THE OLD ONE WITH THIS TAG

SAVE THIS TAG FOR THE BENDIX DRIVE
$.50
W. B. D. EXCHANGE ALLOWANCE CREDIT
The retail purchaser of this new genuine Bendix Drive is entitled to a credit allowance of $1.00, which applies to the purchase price of the complete unit, in exchange for the worn Bendix Drive (WBD). All other classes of trade receive a merchandise credit allowance. No merchandise credit allowed unless this tag is returned with the worn Bendix Drive to our central distributor.
PLEASE DO NOT EXPECT TO RECEIVE YOUR CREDIT WITHOUT THIS TAG.
Eclipse Machine Div.
Elmira, N. Y.
Bendix
AVIATION CORPORATION
Form EM-228NF

THEY'RE WORTH MONEY! TO YOU

Now you can return a used Bendix* Starter Drive with the special refund tag to the Bendix Drive Central Distributor and make extra profits on *every* drive that you have replaced. That's why we say—it's easier than ever to make money with every Bendix Drive Sale! You're getting double value and double profits when you use only genuine Bendix Starter Drives on every job. *REG. U.S. PAT. OFF.

ECLIPSE MACHINE DIVISION of Bendix AVIATION CORPORATION
ELMIRA, NEW YORK

Export Sales: Bendix International Division, 72 Fifth Avenue, N. Y. 11, N. Y.

"Don't you think Bobson is overdoing our Safety First Campaign?"

Drive Them Away Today!

FRUEHAUF'S NEW CORRUGATED*

ALL STEEL "Unit-Built" VAN BODIES

This 12-ft. straight-frame Corrugated Van Body with open rear end — complete, painted and mounted on your chassis — delivers for

$593

(Taxes extra)

*Complete-Mounted and Painted - AS LOW AS $593.00

TAXES EXTRA

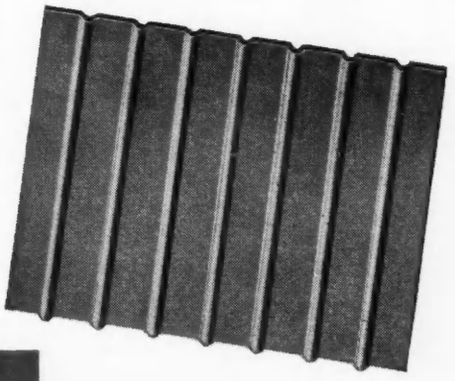
Now Fruehauf brings you its handsome, brand new Corrugated Van Bodies—with the same extra-sturdy, rugged-built construction as Fruehauf's famous corrugated-steel Trailers! All steel and "Unit-Built," they're welded from stem to stern into one single, rigid, trouble-free unit—with nothing to work loose, warp, splinter or rattle.

Fruehauf's New Corrugated Van Bodies are available in 12-14-16 ft. lengths—in popular straight-frame or wheelhousing models. And at *extremely* popular prices!

BODY DIVISION
FRUEHAUF TRAILER COMPANY
DETROIT 32, MICHIGAN

Fruehauf's famous Corrugated Construction for GREATER STRENGTH!

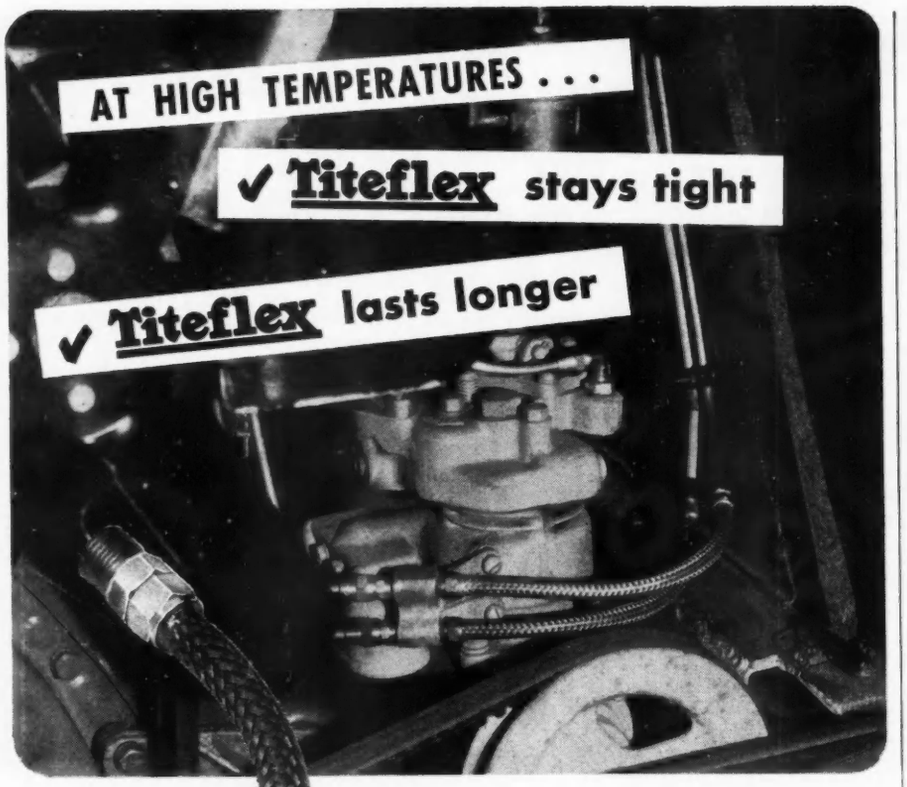
Every corrugated channel (spaced 8" apart) becomes a load-supporting member. Lighter-yet-stronger corrugated construction contributes to long, trouble-free life of Fruehauf's rugged "Unit-Built" Van Bodies.



FRUEHAUF
Truck Bodies

Ready for the road in a matter of hours

Custom-built quality at production line prices!



Titeflex

ALL-METAL
Flexible Gas, Oil
and Air Lines

Because of longer service life, Titeflex automotive lines actually cost less than rubber, synthetic, or fabric packed hose. Titeflex will not bake, crack or deteriorate despite high engine heat. Yet it is fully flexible, to offset severe vibration and to make installation easy. There are sizes of Titeflex for all cars, busses and trucks. Insist on Titeflex.

Write for catalog.

Titeflex, Inc. 500 Frelinghuysen Ave. · Newark 5, New Jersey

TITEFLEX FILLS AUTOMOTIVE REQUIREMENTS TO A . . . T

Diesel Horsepower

Continued from Page 61

of blame. It is well recognized that any engine will smoke and function unsatisfactorily when loaded beyond its power rating. Overloads, then, are guilty of contributing to much of the smokers on our highways. Drivers have been known to "reset" the governors in an effort to attain more power, and many have set up the "smoke stop" in an effort to keep the loads running. Actually they only pull down more smoke, pull the guts out of their engines and put the shop on an overtime basis. Lugging on hills as well as under excessive loads, by overcooling the engine and by overloading it, contribute much to the smoke problems.

Noise

EXCESSIVE noise in the diesel engine has been largely overcome with improved mufflers, new and larger engines designed to pull the loads put behind them, and improved driver operation of these vehicles. It is well established that a poor driver can abuse any engine to a point where its noise is a public nuisance. Training, however, has been effective in reducing gunning of engines at stop signs, the backfiring down hills and the revving up of the power plant to make the next hill. Better maintenance of mufflers has helped control this trouble.

Aside from this there are other noises characteristic of an improperly operating diesel, noises which should help in diagnosing the condition. Knocking may be caused from dirty injector spray holes, air in the fuel lines, a cracked injector spray tip, or open priming valves. Improper injector adjustment can result in misalignment of the push rod to a point where it strikes the cylinder block. This, again, would result in a peculiar knocking.

Detonation may occur when the engine is not properly warmed up, with early timing or with leaking injection nozzles. Overheating, poor fuel and hot spots in the cylinder head will contribute to pinging or detonation. And finally, like the gasoline engine, carbonized pistons, improper valving, worn pistons and rings will likewise cause detonation.

In two-cycle designs excessive crankcase dilution due to fuel leaks may result in a detonating engine. Leaky blower gasket housings, gaskets or oil seals, by contributing to fuel or oil in the air charge during the compression stroke, can cause similar detonation.

END

Please resume your reading on P. 62

For Prompt Service on

Quality Parts for Cars, Trucks and Buses of all makes

Your NAPA Jobber is a Good Man to Know!

Once he knows your vehicles and their requirements, your NAPA Jobber can give you the fast, comprehensive, *consistent* parts service you require to keep your fleet rolling on schedule.

From his own stocks, your NAPA Jobber can meet the vast majority of your normal requirements on cars, trucks and buses of *all* standard makes and all ages. Seldom-used parts, your NAPA Jobber can get overnight or quicker from the nearby NAPA Warehouse. There's no waiting for "shipment from the factory."

And you can be sure of *quality* parts. All the NAPA lines shown below are recognized by automotive engineers as meeting the highest standards of genuine quality. Many of them are widely used as original equipment.

• • •

If you haven't already explored the advantages of doing business with your NAPA Jobber, get in touch with him now. Let him analyze your parts picture, and show you how NAPA Jobber Service can save you time, simplify purchasing and speed up your schedules.

NATIONAL AUTOMOTIVE PARTS ASSOCIATION • DETROIT 1, MICHIGAN

N·A·P·A *is the largest Independent Parts Organization in the Industry!*

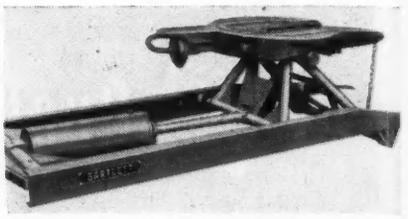
American Brakeblok · PURITAN · UNITED PARTS · Monmouth · STANDARD · Allied · GRAPHO · BROWN LIPE · BRIGGS · Allied · ECHLIN · PRECISION · Soundmaster · Allied · A.P.C. · DETROIT · ZOLLNER · TRICO · Allied · RAYMOND · MicroTest · BALKAMP · RARITAN · DITTMER · Thomson · CELORON · Allied · WISCONSIN · New Britain · MARTIN-SENOUR · DUCKWORTH · Modac · Belden · FEDERAL · Spicer

HYDRAULIC FIFTH WHEEL

Speeds Trailer Spotting

Cab-controlled lifting to 14 in. eliminates need to leave cab to wind up landing gear

A NEW automatic, cab-controlled, hydraulic lifting fifth wheel for quick depot or dock switching of trailers, has been engineered by the Bartlett Trailer Corp. of Chicago.



Bartlett's hydraulic fifth wheel, completely controlled from the cab, has a lifting range of 14 in. Hydraulic pump, operated from transmission power take-off, supplies pressure to hydraulic power piston which pushes lever mechanism on rollers in track

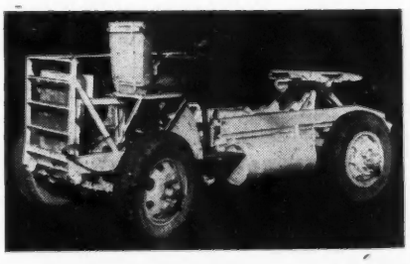
The cranking or winding up of landing gears usually necessary in the switching operation is eliminated along with the necessity of leaving and reentering the cab.

Controlled From Cab

THE FIFTH wheel is completely controlled from the cab. The jaws, operated by an electrical push button mounted on the dash, are positively locked automatically by vacuum.

Construction and Operation

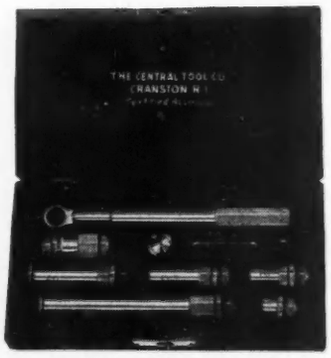
THE UNIT consists of a 34-in. to 36-in. standard fifth wheel with double-locking jaws mounted with side runner channels. It operates on a conventional king pin. The lifting device is a hydraulic cylinder with a power take-off on the transmission and a hydraulic pump to operate the cylinder. The piston travels in a rearward direction pushing up a lever mechanism on rollers operating in a double track.



Hydraulic fifth wheel mounted on yard jockey made up from old tractor unit. Operator sits facing rear which facilitates the rapid spotting of trailers

This lifting device is capable of lifting a 50,000-lb payload 14 in. high and can be installed on any make of tractor, spotting unit, or yard jockey.

Set No. 745RL Outside Micrometers • Range: 0 to 4 inches by thousandths • Four Micrometers, complete with Ratchet Stops, Lock Nuts and Standard Test Gauges in DeLuxe Plush-Lined Case.



Set No. 808 Inside Micrometer • Range: 1½ to 8 inches by thousandths • Complete with Extension Handle in DeLuxe Plush-Lined Case.

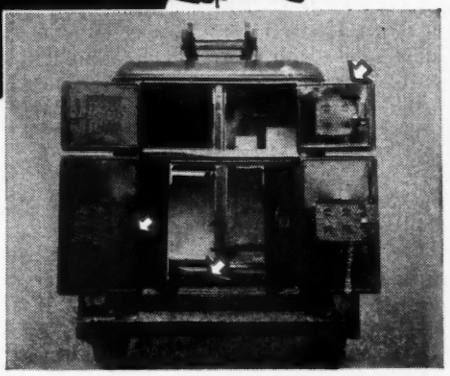
Central Micrometers are right in step with today's need for accurate automotive work. Central Mike fits 'em right . . . the first time . . . every time: Eliminates fit-and-try methods and speeds repair jobs. That's why more motor mechanics buy Central Micrometers than any other make. See your jobber or write for catalog. There's a Central Micrometer for every requirement.

THE CENTRAL TOOL COMPANY
474 WELLINGTON AVENUE
CRANSTON 10, R. I.

CENTRAL Certified Accuracy MICROMETERS ★

For Half a Century Specialists in Fine Micrometers

Another difficult fastening operation proves the economy of DU PONT EXPLOSIVE RIVETS



Tight corners and other trouble spots are quickly and easily fastened with Du Pont Explosive Rivets.

Rugged strength, neat appearance and economical fastening were "musts" in the construction of this animal ambulance. That's why the Harrisburg Truck Body Company selected Du Pont Explosive Rivets for this job.

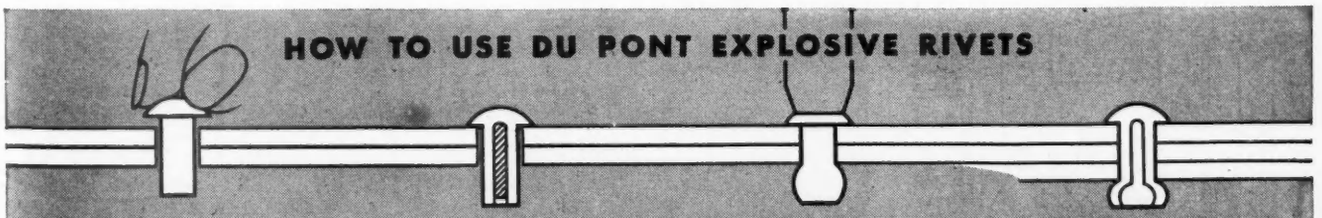
Du Pont Explosive Rivets are strong, one-piece fasteners. They're easy to insert, and 20 to 25 per minute can be set by one man. No rivet-finishing operations are necessary . . . seams and joints are clean, neat and tight-fitting. And work progresses just as quickly past blind joints and tight corners as it does along open seams.

Speeded assembly pares production costs to a minimum.

Du Pont Explosive Rivets save on stock costs, too. For their wide grip range makes it possible to reduce the number of rivet sizes needed on most jobs.

Perhaps Du Pont Explosive Rivets can cut fastening costs for you. You'll find complete information in a new illustrated manual, "C-8." Write for it today. E. I. du Pont de Nemours & Co. (Inc.), Explosives Dept., Wilmington 98, Delaware.

HOW TO USE DU PONT EXPLOSIVE RIVETS



Insert Explosive Rivet into drilled hole—close tolerances are no longer necessary.

Cross-section diagram shows minute explosive charge in cavity of Rivet shank.

Touch Rivet head with heated iron—shank expands in as little as one-half second.

Shank fills hole completely. Note how barrel-shaped head grasps varying thicknesses.

DU PONT
REG. U. S. PAT. OFF.

DU PONT HI-SPEED
INDUSTRIAL EXPLOSIVE RIVETS

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

Sludge Removed with
FURFURAL FLUSHING SOLVENT

OF PARTICULAR INTEREST to the stop and go fleets, such as bakeries, bus, taxi and milk companies, etc., is the solvent furfural, which is used to remove sludge from automotive crankcases.

A product of the Quaker Oats Co., furfural is a liquid having a rather high boiling point and unusual solvent properties. While it has a pungent odor, it is not highly toxic and may be handled safely with exercise of reasonable care. This includes good ventilation and washing off if spilled on any part of the body.

Furfural and Tar Acid

FURFURAL can be used alone as the solvent, however, generally a mixture of furfural and tar-acid oil is employed. A typical mix consists of half furfural and half tar acid oil. The manufacturer states that the regular use of the solvent treatment in a preventative maintenance program will help keep engines free of sludge, gums and varnishes. Higher engine efficiency will be extended over longer periods of operation.

Recommended Testing Procedure

FOR TESTING the effectiveness of furfural, it is recommended that inspection of the crankcase and valve chambers be made before and after the solvent treatment is given. Cylinders also should be checked for compression before and after the treatment.

The suggested procedure for solvent treating is as follows:

1. Thoroughly drain oil (hot if possible).
2. Refill with flushing oil to level which will permit rods to dip and splash oil throughout inside of the engine.
3. Run engine for approximately 1 min. above idle (500 rpm) and drain.
4. Fill crankcase with furfural-tar-

"Call again, Mr. Osgood. Step down, please."

Periodical flushing with furfural and tar-acid oil mixture keeps engines free of sludge

acid oil solvent in same quantity used in first flush.

5. Run engine 10 min. above idling speed. Do not race engine, since excessive amounts of solvent will pass rings and possibly foul plugs. Drain.

6. Run engine with new flushing oil for approximately one min at speed above idle (500 rpm), and drain.

7. Fill crankcase with regular lubricating oil, and run engine to get oil to all parts. Then drain.

8. Remove pan and clean oil pump screen if necessary.

9. Install pan and fill with regularly used lubricating oil.

Clean Oil Screen

IT IS extremely important that the crankcase pan be dropped after completion of the first solvent treatment on engines which have not had the treatment before or which have high mileage since last cleaned. The solvent mixture will almost always dissolve the sludge but in some cases may get behind the material, loosen it from the walls and cause it to come down in large chunks. The chunks may plug the oil pump screen and cause bearings to fail, unless the screen is cleaned thoroughly. It is also suggested that the oil pressure gage be checked during the treatment to be sure the oil pump screen remains free and does not clog and prevent proper lubrication.

The complete treatment involves filling and emptying the crankcase handling hot oil and hot solvent mixtures. Therefore, it has been found convenient to screw a quick-acting plug cock into the crankcase plug opening. This can be connected with a length of hose to reach the containers used for storing the solvent and flushing oils. Thus, release of fumes and spillage is minimized.

Furfural is available from The Quaker Oats Co., Chemical Div., Chicago, Ill., in 5-, 10-, and 55-gal drum lots. The tar-acid neutral oil (not a petroleum oil) generally may be obtained locally from manufacturers of coal tar products.

"Push Button" Lubrication

AP Lubri-sprayer Sprays Miracle Power or dgf-123

It makes the old fashioned oil can obsolete! Now you simply push the button at the top of the LUBRI-SPRAYER, direct it at the parts you want lubricated, and the job is done. No more messy grease—no more waste.

Two LUBRI-SPRAYERS are available—No. 5100 contains Miracle Power and No. 5200 contains dgf-123. Both are super-lubricants, containing colloidal synthetic graphite.

The Miracle Power LUBRI-SPRAYER is for general lubrication of dismantled parts, and for oiling such hard-to-get-at places as control links, door locks, springs, and brake parts. It can also be used for final spraying after using dgf-123.

The dgf-123 LUBRI-SPRAYER is for pre-lubricating frictional parts at the time of assembly to provide protection during "break-in."

Order a set of these time saving, money saving LUBRI-SPRAYERS today.

Miracle Power Division

THE AP PARTS CORPORATION

AP BUILDING • TOLEDO 1, OHIO

Manufacturers of: MUFFLERS • PIPES • MIRACLE POWER • dgf-123

Norton Named a Vice President Of Wisconsin Motor Corp.

Phil Norton, general sales manager of Wisconsin Motor Corp., Milwaukee, Wis, has been appointed a vice-president of the company.

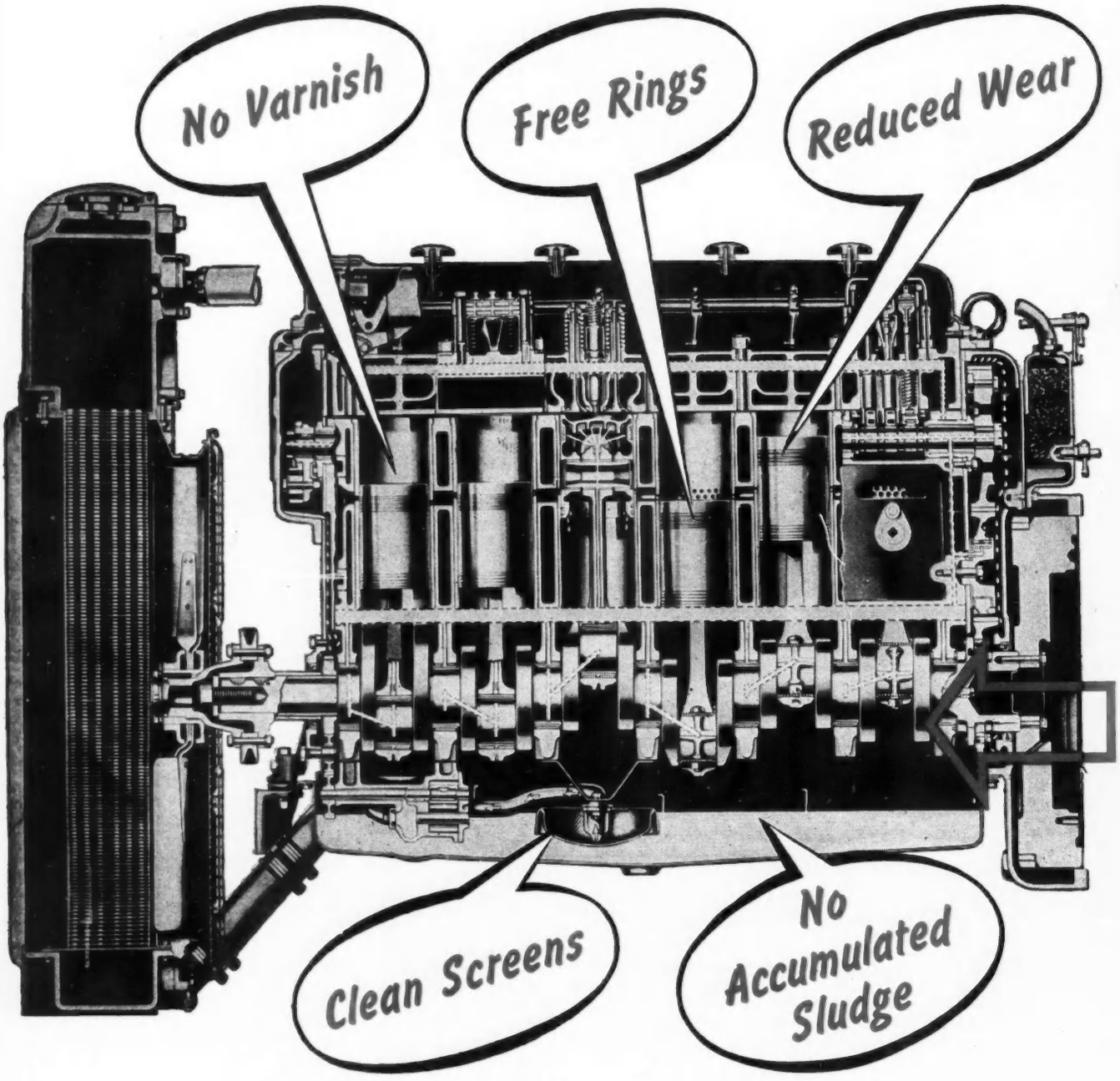
Mr. Norton has been connected with the company in a sales capacity for more than twenty years, occupying the executive position of general sales manager for the past ten years.

John O. Ekblom, Elected Director of White Motor

H. N. Mallon has resigned as a Director of The White Motor Co. Mr. Mallon is President of Dresser Industries, Inc., and is moving his headquarters to Dallas.

John O. Ekblom, New York City, was elected to fill the vacancy. Mr. Ekblom has been active in the development of a number of industrial companies, including the Rockwell Manufacturing Co., and previously had been identified with the motor industry.

In SEVERE DUTY... Can Double Engine



SINCLAIR HEAVY

Your Nearest Supplier of Sinclair Products Will Gladly Arrange for Lubrication

...New SUPER TENOL Life Between Overhauls

New Sinclair SUPER TENOL is an oil specially developed to eliminate the high maintenance costs so frequently encountered in both types of "severe duty" service: — 1. High temperature, high speed, over-load; and 2. Low temperature, light load, long idle, stop-and-go.

Under these abnormal conditions, operators report new SUPER TENOL has more than DOUBLED the life of their equipment between overhauls.

If you operate diesel-powered or gasoline equipment in severe duty service it will pay you to change to new SUPER TENOL now—to keep equipment in operation many more days each year, to save time, labor and money.

DUTY LUBRICANTS

Counsel or Write to Sinclair Refining Company, 630 Fifth Avenue, New York 20, N. Y.

Driver Cooperation Cuts Costs

Continued from Page 73

damage due to improper operation whereby correction by the transportation department will result in considerable economies to the property.

Let's take cars or trolley coaches first. We all remember the old coasting records years ago on cars, and how the competitive spirit was built up between operators; resulting in some very remarkable savings in power. Today, with our dense traffic conditions, this arrangement might not be possible. But there still are times when coasting can be used, especially on the longer suburban runs. Why not train our operators to conserve current?

As it is, we frequently see a car coming to a stop zone at almost full speed, the operator shuts off the power and uses excessive braking, including the track brake, to make the stop in the shortest possible time. This, of course, not only uses power unnecessarily but wears out the rail and the track brake shoes. A rail renewal due to wear at one of our car stops costs around $2,000, and we have hundreds of these stops.

Taking the cars and buses together, I mention the necessity for easy starts and stops not only to eliminate wear on the equipment and power or fuel and above all, but to save inside accidents where people are thrown in the vehicle due to these starts and stops. We appreciate, of course, that it is necessary to make emergency stops to avoid accidents, but some operators can take the best running and best designed vehicle and use it so roughly that, to the passengers, it feels like they are riding on a hay wagon.

Another favorite pastime for the operator is to pump the power pedal up and down while running—doing no good, wasting current, and raising hell with contactor tips.

Passing over crossovers at a high rate of speed breaks springs, damages wheel assemblies, and breaks torque arms. These are things which we see every day in every city.

Then we have bus operators riding the clutch with the resultant damage; fanning the air brake. with a waste of air and wear of the brake lining and drums; curbing of tires, etc. In regard to the latter, I would like to point out that 10 per cent of our tire changes in April, 1950, were caused by curb wear on the tires.

At times, we experience broken axle shafts. The operator must know what has happened. He should stop immediately and call in for another bus instead of trying to keep on moving along; thereby damaging the whole rear axle housing, as well as other parts.

At any time a serious trouble seems to have developed with his coach, the operator should stop and call in, and

(TURN TO PAGE 138, PLEASE)

NASH BROS. Body-Gard BUMPERS

CUSTOM-BUILT FROM HI-TENSILE STEEL

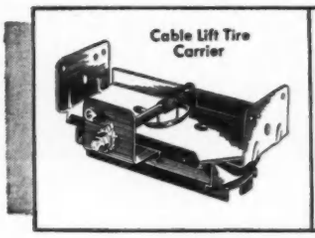
CHANNEL TYPE CONSTRUCTION

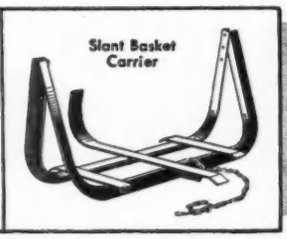
Flexible tooling and equipment assure economical prices and PROMPT DELIVERY on small or large quantities of Body-Gard Bumpers. They are available for the front and rear of all types of trucks, truck bodies, buses, coaches and all other commercial vehicles.

Send for further information explaining how easy it is to order custom-built bumpers to your exact specifications.

5 FACE WIDTHS:
3½", 4½", 5½", 6" and 6⁹⁄₁₆" wide

3 STYLES:
REGULAR—With 3⅜" end form
FULL—With end form up to 7½"
WRAP AROUND—End form as deep as required





NASH TIRE CARRIERS
Cable Lift Carriers available in Under Frame, Side Mount and Frameless Types. Slant Basket Carriers, universal for any rim or any make of steel wheel.
For replacement or original equipment write for folder.

NASH BROS. COMPANY
PAYNE STREET and DEWEY AVENUE, EVANSTON, ILLINOIS

Tighter Reciprocity

Motor vehicle administrators of Region Three will hold a work shop at Chicago on or before the middle of August to discuss threats to motor vehicle reciprocity among the states comprising the region. The problem has arisen because of the action by some fleet operators in moving their domicile from one state to another one with lower fees. It is understood that Wisconsin has court action pending to prevent an operator from moving to another state. The administrators want to develop an area-wide reciprocity agreement that all the states in the region can subscribe to. States in Region Three are Wisc., Minn., Ohio, Mich., N. Dak., S. Dak., Nev., Kan., Ill., Mo., Iowa, and Ind.

Give the spark plugs a chance. Every time you tune up a car, check the spark plug wires. Every time you install new plugs, put in new wires too. Old wires leak power, waste gas. New wires invariably restore pep and power.

There is a Belden Spark Plug Wire for every requirement. On 100-ft spools—or in timesaving sets. For plus profits, minus all complaints, specify Belden Spark Plug Wire.

Belden Manufacturing Company
4695 W. Van Buren Street
Chicago 44, Illinois

Sell — — — **Belden** *Automotive* **WIRE**

BATTERY CABLES • SPARK PLUG WIRES • LIGHTING WIRES

Driver Cooperation

Continued from Page 136

not attempt to run and cause additional damage to the equipment and possibly create a serious hazard.

Damage due to abuse is usually the result of repetitive carelessness in regard to little things; frequently in combination with ignorance and not too high a degree of skill. Adequate and aggressive supervision by personnel capable of discriminating between carelessness and lack of know how, and who are not afraid to lay it on the line when necessary, will work wonders in these cases. In the small percentage of cases where instruction and admonition is not effective, it is necessary to build a record of repeated incidents with progressively heavier discipline, and, as a last resort, separation. To deal effectively with such cases, definite and specific information is necessary. Generalities are little help.

Good Operating Techniques Pay

YOU men are familiar with the Shell Mileage Marathon. This Marathon was started some time ago, when the employees at the Wood River (Ill.) Plant of Shell Oil Co. were continually arguing and discussing as to who got the best economy from his own private car. Shell then decided to set up a competitive Marathon each year, letting the owners experiment with their private cars in anyway they saw fit, in order to increase their gas mileage, and then run their cars over a 14-mile test course.

This suggestion was taken up with enthusiasm and has become very popular, and each man is trying hard to pass the present high mark.

This high mark now stands at 150 mpg.

This remarkable mileage was made possible only by some rather drastic changes in the car itself, speeds not exceeding 20 mph, delicate driving techniques, etc. It is not suggested that this is anywhere near possible in everyday riding on the ordinary stock car. But it gives food for thought as to whether between this maximum and the average for a stock car, possibly 18 to 20 mpg, there is some midway mark which can be obtained and maintained by using proper driving technique.

Other more practical experiments have been made along this line by some bus operators. It was found that it was possible to increase the mileage by considerably over 1 mpg. In addition to that, the operator making the best fuel economy made as good or better time between points.

(TURN TO PAGE 140, PLEASE)

The NEW

BUFFALO better-built

VL FIRE EXTINGUISHERS

with- DRYEX THE AMAZING NEW DRYING AGENT!

Every motor vehicle, every garage, repair shop and spray booth needs the protection of the Buffalo *better-built* VL Fire Extinguisher, *now more dependable than ever.* Each VL Extinguisher now contains DRYEX, the exclusive new drying agent that removes all traces of moisture, prevents corrosion and rust, insures continuous accuracy of performance and adds many years to the dependable life of the extinguisher.

Write us for full information on DRYEX and name of your nearest Buffalo distributor.

BUFFALO FIRE APPLIANCE CORPORATION
DAYTON 1, OHIO
Established 1895

"Harvest of Stars" For ATA

International Harvester has announced that the studio audience at the Oct. 1 broadcast of its radio program "Harvest of Stars" will be reserved exclusively for members of ATA and their families attending the annual convention. The broadcast will originate from the N. B. C. studio in Radio City, N. Y., with the entire auditorium reserved for the ATA guests. No tickets will be required, but admittance will be by presentation of the ATA receipt.

"Percentage of Gasolene Wasted"

If this is important to your fleet operation then write Cities Service today for a free demonstration analysis.

All gasolene-powered vehicles benefit by this unique Cities Service Power Prover test.

Here's how this helpful service benefits you: The exclusive Cities Service Power Prover is an important part of the Cities Service "Clean Engine" Program. The unique instrument detects poor combustion. It tells you quickly and accurately the percentage of gasolene wasted by each vehicle in your fleet. Necessary adjustments are then made to reduce this waste.

Scores of major fleet operators are profiting from this unique service. Their typical maintenance schedule includes: first, crankcase drains of all fleet units. Next Cisco Solvent is used to flush out trouble making deposits. Then the crankcase is refilled with Cisco 800 Series Motor Oil. Now comes the Power Prover test to check the exact efficiency of combustion. This process is repeated at every other oil change period.

The results of this "clean engine" maintenance program have been lower operating costs per mile . . . lower gasolene consumption and reduced maintenance and repair expense. Put this program to work on your fleet. Use coupon below.

CITIES SERVICE OIL COMPANY
Sixty Wall Tower, Room 669, New York City, N. Y.

Please send me without obligation information about your "Clean Engine" Program and the exclusive Power Prover.

Name_____

Company_____

Address_____

City_____ State_____

Driver Cooperation

Continued from Page 138

Some of these techniques, which I needn't mention, are easy starts and stops, shifting into high gear in the shortest possible time, eliminating idling of buses at terminals wherever possible, etc.

Can you see what can be saved from such a training campaign?

On buses, we research continually for ways to increase our fuel mileage. If we can increase this by ¼ mpg, we feel we have really accomplished something.

On the Capital Transit system, an additional 1/10 mpg is equivalent to a saving of $56,745 a year. On ½ mpg, the saving is $248,150, and, on 1 mpg additional, $429,051 per year.

Other Suggestions

THERE are many other ways in which the transportation department can aid the maintenance department effect appreciable economies. Here are just a couple:

A complete and understandable report on bus and car condition report cards turned in by operators would be most helpful to the maintenance department.

I would suggest that operators can help greatly by keeping their vehicles clean while in service; as regards trash, papers, etc. A trash bag is provided on most vehicles, but it is not infrequent to see a vehicle turned into the carhouse or garage with the whole floor littered with transfer stubs.

I, therefore, suggest that the operator should be made rsponsible for cleaning up this litter, including picking up papers, etc., during his layover period; maybe even dust the seats, where necessary. Frequent complaints are received from passengers, particularly in the summertime when light clothing is worn and windows are kept open, that their clothes have been soiled by the dust on the seats.

Would it be too much to ask the operators to dust the seats off once in a while?

Interdepartmental Cooperation

TO ACHIEVE these objectives—cooperation between the mechanical and transportation departments, and the retraining of operators—I suggest that meetings be held between the departments, with a free discussion of the problems of both departments. This should include a discussion and physical demonstration showing the possibility of a great reduction in maintenance costs through proper and careful operation of a vehicle.

END

Please resume your reading on P. 74

the Air Impact Wrenches *with controllable power*

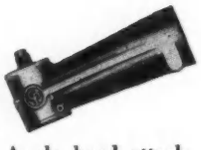
There's a CP air wrench—with controllable power—for every automotive job, from driving screws to tightening spring U-bolt nuts on the heaviest trucks.

Controllable power assures that nuts and cap screws on hydra-matic units, connecting rods, cylinder heads and main bearings will be run exactly to proper tightness.

Capacities: CP-730 to 7/16" bolt size; CP-750 to ⅝" bolt size; CP-770 to 1" bolt size. Handy metal carrying cases are available.

A still larger wrench, CP-365, capacity to 1¼" bolt size, is available in straight or angle head models.

Write for full information.



Angle head attachments make it easy to handle awkward-spot jobs.

CHICAGO PNEUMATIC TOOL COMPANY

General Offices: 8 East 44th Street, New York 17, N. Y.

AUTOMOTIVE SERVICE EQUIPMENT • FENDER IRONS • ELECTRIC TOOLS
AIR IMPACT WRENCHES • AIR COMPRESSORS • PNEU-DRAULIC PUMPS

Wisc. Week-End Ban

The Wisconsin public service commission has issued an order prohibiting use of motor vehicles of more than 8000 lb. gvw on certain designated highways between specified hours on Saturdays, Sundays, and holidays. The order excludes vehicles used exclusively for carrying passenger, livestock, perishable foods, and newspapers. Wrecker trucks also are exempt. This year the ban applies from July 1 to the second Sunday in September and in subsequent years will run from May 29 through the second Sunday in September. Hours during which the trucks are prohibited from using the designated highways are from 1 to 10 p.m. on Saturdays and from 9 a.m. to 10 p.m. on Sundays and legal holidays.

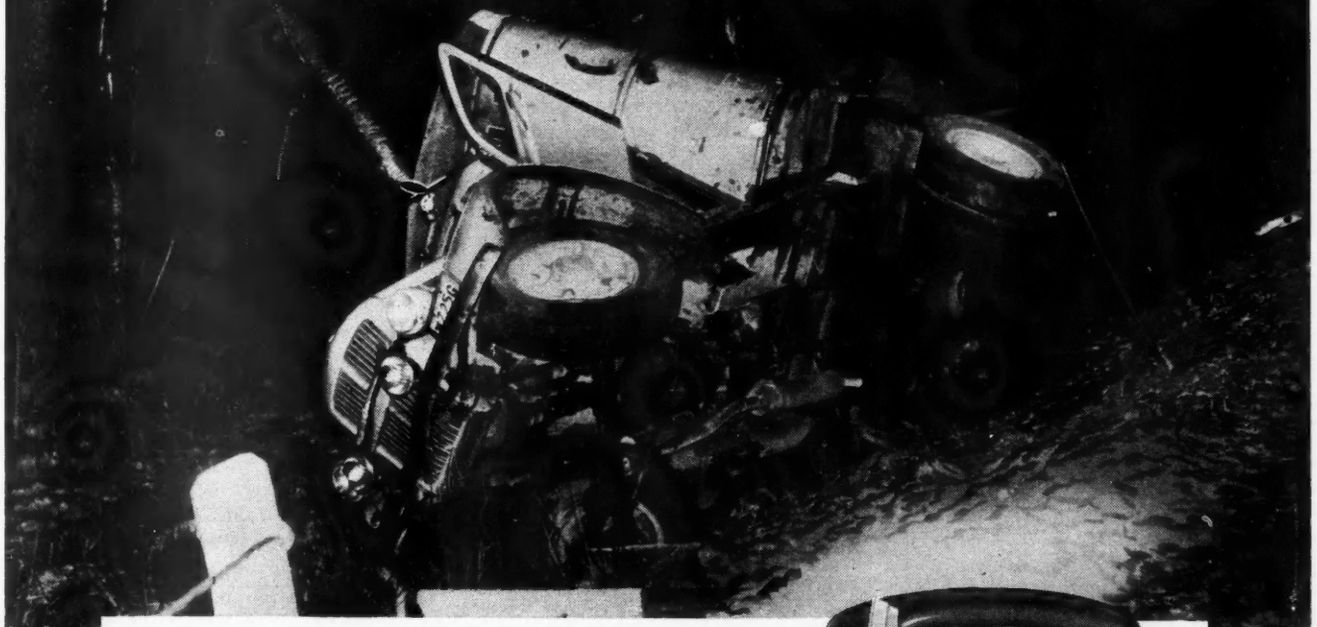
★★★★★★★★★★★★★★★★★★★★★★★★★

SLOWGAN

To stay in the Pink, Watch out for the Red and Green.

★★★★★★★★★★★★★★★★★★★★★★★★★

"Driver Dis-ease" CAN BE COSTLY!



MONROE E-Z Ride* Truck Seats Keep Operators Fit and Alert

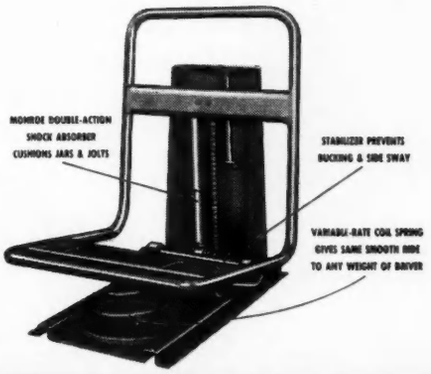
A worn-out truck driver is a bad safety risk. According to a reliable survey, 1 driver in 3 who had an accident caused by falling asleep was a truck driver.

Truck accidents are plenty costly in cargo and vehicle loss. Expensive lawsuits often result. And you, Mr. Fleet Owner, are the loser!

Monroe E-Z Ride Truck Seats keep your drivers feeling more fit—alert against accident dangers. Fatiguing, back-busting jolts are cushioned by a Monroe Double-Action Shock Absorber, plus a variable-rate coil spring that gives any weight of driver the same smooth ride.

For increased safety and efficiency, Monroe E-Z Ride Truck Seats are a sound investment for any fleet owner—for you.

**Reg. U. S. Pat. Off.*


MONROE DOUBLE-ACTION SHOCK ABSORBER CUSHIONS JARS & JOLTS
STABILIZER PREVENTS BUCKING & SIDE SWAY
VARIABLE-RATE COIL SPRING GIVES SAME SMOOTH RIDE TO ANY WEIGHT OF DRIVER

MONROE®

When shock absorbers on your cars and trucks need replacing, always specify Monroe Airplane-Type Shock Absorbers—the choice of leading automotive engineers.

MONROE AUTO EQUIPMENT CO.

Monroe, Mich. — World's Largest Maker Of Ride Control Products

Reo's Army M-34

Continued from Page 70

carries a Duo-Grip parking brake capable of holding the vehicle on a 60 per cent grade in either direction.

The transfer case was designed for a single drive line tandem axle arrangement with one output shaft to the rear, the other to the front axle. From the standpoint of interchangeability, the unit not only has numerous parts interchangeable with parts of the driving axles but can be used in vehicles having either 6 x 6 or 4 x 4 drive.

Underwater Kit

AS MENTIONED earlier, the vehicle carries an underwater kit, consisting of standpipes for the intake and exhaust systems. In addition, it is necessary to connect the air compressor inlet to the air cleaner by means of a supplementary hose. Further protection is provided by using a waterproof type breather on the oil filler.

Supplementing these devices, the vehicle is provided with a control valve on the instrument panel which is actuated before fording to shut off the normal crankcase breather and thus enable the engine to run with pressurized crankcase. This arrangement makes the engine completely waterproof.

So far as air temperature is concerned, all components of the engine will operate satisfactorily under the specified conditions. The only exceptions to this are the fan belts and oil seals. These will function satisfactorily in the range of minus 40 to 125F. However, a kit conaining special fan belts and oil seals is required to take care of the range from minus 40 to minus 65F.

It may be noted at this point that all parts of the vehicle are treated to prevent corrosion and fungus attack. It is of interest that both the muffler and tailpipe are fabricated of aluminized steel to resist corrosion.

Because of underwater fording requirements, all running gear units are vented into a manifold system which is connected to the air cleaner. These include: axles, transmission and transfer case, brake master cylinder, brake booster cylinders, ignition distributor, fuel pump, and gas tank.

With respect to running gear units, the M-34 is equipped with a 12-in. Long clutch of dry disc, single plate type; a five-speed, direct in fifth, Spicer No. 3052 synchromesh transmission with power take-off opening on the left side; and the synchromesh Timken transfer case described earlier.

The three driving axles are supplied by Timken, the front axle being the Timken FC-240-H-X1, double-reduction; while the rear axle tandem combination is the Timken-SFD-75-H-X2, of double reduction type.

(TURN TO PAGE 144, PLEASE)

Take it easy . . . . WITH THE NEW DRUM Safety JACK

SPOT IT—under any axle, from any angle.

WITH SWIVEL ACTION

Do tire, brake and bearing jobs faster—without breaking your back or crawling under trucks. This heavy-duty jack works anywhere—under any wheel. One man does two men's work with a DRUM *Safety JACK.*

SWING IT—Bring dollies into position for removing wheels without lifting.

LEVEL IT—Pull wheels easily without damage to bearings or seals.

Use the DRUM *Safety* JACK for dual wheels, single wheels, or as a floor jack.

● QUICKER
● SAFER
● LIGHTER

DRUM SAFETY JACK

DRUM JACK CORPORATION
Subsidiary of The Cleveland Pneumatic Tool Company
3769 EAST 77th STREET • CLEVELAND 5, OHIO, U.S.A.

We would like to know more about the DRUM *Safety* JACK.

Company _____

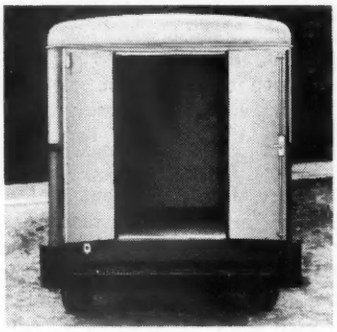
Address _____ *City* _____

Britain Topped European Truck and Car Output in '49

With a total of 630,665 vehicles for 1949, Britain heads European automobile production with a substantial margin. The total is made up of 412,290 passenger cars and 218,375 trucks and similar vehicles. Of this total 258,000 passenger cars and more than 93,000 commercial vehicles were exported. The following shows the situation as compared with other European countries, the figures being official with the exception of Germany, which is an estimate based on the half year's results:

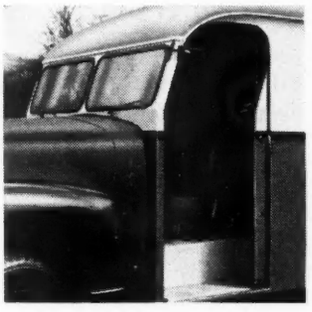
	1949 Production Passenger	Trucks	Total
Great Britain	412,290	218,375	630,665
France	137,677	97,966	235,643
Germany	93,516	70,000	163,516
Italy	65,379	20,675	86,054

Cut your "per package" delivery costs with the NEW YORK-HOOVER Model C-8R



Showing rear compartment accessible through rear doors. Note steel body floor. Also, sturdy rear step bumper with corner guards. When the entire body interior is insulated, a single refrigerator type door is used at rear end.

Dress-up—speed-up—and build-up with the new York-Hoover Model C-8R Body. Designed to blend with the lines and specifications of latest model chassis. Utility and eye-appeal carefully planned to contribute greatest advertising value. Ideal for door-to-door or store delivery. Before you buy—see the Model C-8R!



Wide and high entrance space, convenient sliding doors, deep step wells and swivel driver's seat, all contribute to ease of working out of the front end of body.

Write for Bulletin No. 929 Today!

YORK-HOOVER BODY DIVISION CORPORATION

NEW GUN IRON BRAKE DRUMS

at LOWER COST-PER-MILE, *too*

Hunt-Spiller Brake Drums are now being made of a new Gun Iron alloy which eliminates heat-checking in all but the most severe cases and at the same time equals or surpasses the wear-life of previous Gun Iron drums. In addition, in most instances, these drums take the squeal out of heavy-duty braking.

Hunt-Spiller pioneered the first cast brake drum over twenty years ago . . . a Gun Iron drum that wore so well it shortly was adopted and preferred by the bus and truck industry. This *new* material, an alloy of Gun Iron, is the result of years of research in the Hunt-Spiller laboratories to increase wear-life and particularly overcome the serious problem of heat-checking. On-the-road performance records prove the success of that research.

Hunt-Spiller drums are made to original equipment specifications for most busses and trucks. They are accurately machined for easy, kink-free installation; fully guaranteed. For complete details send for new descriptive bulletin which includes some outstanding results reported by users.

HUNT-SPILLER GUN IRON • HSGI • AIR FURNACE PROCESS

HUNT • SPILLER

MANUFACTURING CORPORATION

AUTOMOTIVE DIVISION

399 DORCHESTER AVENUE • SOUTH BOSTON 27, MASS.

Reo's Army M-34

Continued from Page 142

Service brakes are "air-over-hydraulic" with a Bendix-Westinghouse 7¼ cu ft capacity air compressor and 1956 cu in air reservoirs. The brake booster is a Midland 4½-in. Air Hy-Power assembly. The hand brake is the Timken Duo-Grip, mounted on the transfer case.

Ross TA-66 cam- and twin-lever steering gear is standard, having a ratio of 23.4-19.5-23.4 to 1. Semi-elliptic springs are employed front and rear. Direct, double-acting shock absorbers are mounted at the front suspension only.

Interchangeable Parts

INTERCHANGEABILITY of parts, particularly with respect to the three driving axles, has been carried out to an amazing degree through deliberate design planning. Some impression of what has been accomplished may be gained from a comparison of this vehicle with World War II vehicles of similar kind. The cost of spare parts per vehicle in World War II, represented about 15 per cent of vehicle cost. For the M-34 the cost has dropped to 10 per cent of vehicle cost. But from the standpoint of bin storage the result is even more striking, since the interchangeability program represents a saving of 1/3 in bin storage space.

As a further example of interchangeability, Reo points out that all frame cross members are stamped from the same die. Although they are not interchangeable in the strict sense of the term, owing to differences in drilling, they are basically the same stamping.

Coming to the details of the power drive, it is of interest that the new transfer case provides for a straight line through drive to the rear driving axles, thus reducing the angularity of propeller shafts. Moreover, increased ground clearance is obtained by the use of the top-mounted double-reduction final drive.

END

Please resume your reading on P. 72

Truck Tire Sales Up

Shipments of passenger casings by manufacturers were off slightly in October to 5,784,685 units from the September level of 5,820,969 casings, while shipments of truck and bus casings were substantially higher at 1,054,919 units, compared with 925,284 in the previous month, according to the monthly report of The Rubber Manufacturers Association, Inc.

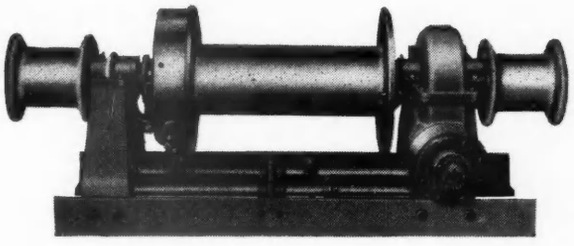
APPROXIMATELY

Out of every TEN are

6

TULSA* WINCHES

TRUCK POWER WINCHES



Approximately six out of ten truck power winches purchased today will be Tulsa Winches. Top performance, quality materials and complete safety combine to make Tulsa Winches the choice of users in all industries everywhere.

For literature or information concerning YOUR particular winching problems, consult your nearest Tulsa Winch dealer or write . . .

*Reg. U.S. Pat. Off.

Tulsa Winch

TULSA, OKLAHOMA DIVISION OF VICKERS Inc.

815-19 E. First Street

THE WORLD'S LARGEST MANUFACTURER OF TRUCK POWER WINCHES

Handling Accident Repeaters

Continued from Page 55

fleet, its distribution, union cooperation, insurance carrier, type of training program, attitude of management—all of these, and other factors, will determine what can be done with repeaters.

1. *Driver Selection and Training.* The best time to eliminate the potential repeater is during the selection and training period, before he is on the payroll. There was a time when the manpower situation was tough, but today fleets can afford to be selective. Time spent in hiring the best drivers possible, and adequately training them, is time well spent.

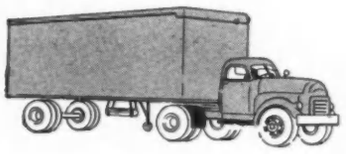
Personnel and safety departments should use the various practices that have been developed and are discussed in Kramer's book, *Safety Supervision in Motor Vehicle Fleets.* Truck and bus drivers range from 50 to 100 in ability and performance. A fleet doesn't want to take on 50-per-centers if it can hire 90-100-per-centers through a selective process.

Mention also should be made of the training of fleet supervisors. The Center has recently held two successful courses for fleet supervisors at Albany and at Buffalo, with a total enrollment of 90. Over 500 have received training at the Center in the past ten years, and hundreds of others have been in courses given by the National Committee for Fleet Supervisor Training in more than 30 colleges. These training programs have served to upgrade the work being done by fleets.

But to get back to the repeaters. Fleets should use the best selection-and-training program they can set up; it will pay dividends. If the fleet is too small to maintain a school, be sure that every new driver is given special instruction. Cooperate with your insurance carrier, arranging for meetings to discuss safe practices. Since repeaters, as a group, tend to be poorly informed, efforts should be made to give specific instructions rather than a lot of generalities. Arrange to have all beginners take psycho-physical tests before they are put on the payroll. If drivers show incompetence or signs of accident-proneness during the 30- to 60-day period, that is the time to drop them—otherwise they may become liabilities.

2. *Accident Investigation.* Every accident should be investigated, including the minor, for the latter is often a symptom of bad practices. Representatives of the safety department, the manager or superintendent, and in some fleets the representative of the insurance carrier, should assist in this investigation. The most important objective of the investigation are to determine the *specific and underlying causes* and to *fix*

(TURN TO PAGE 150, PLEASE)



BUTANE—PROPANE
A New Surge of
POWER
for Truck Fleets

ALGAS Multi-Jet
CARBURETORS

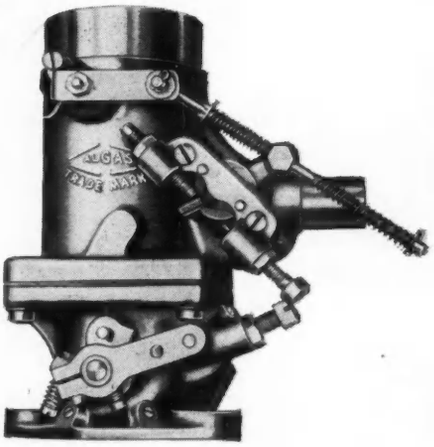
assure more economical operation

reduce excessive maintenance costs

cut motor oil consumption

accelerate more power

ALGAS IS A PIONEER IN THE LP GAS INDUSTRY



ALGAS Carburetion equipment has a record of successful operation in the Butane - Propane fuel field. Eighteen years experience is behind the complete ALGAS line. Today more and more fleet owners are turning to LP fuels because they develop complete combustion that leaves no carbon, sludge or gummy deposits. This means marked economy of operation. As the trend to Butane-Propane continues, the preference is swinging to ALGAS because it stands for perfectly engineered LP equipment.

Write or wire today for engineering information

BUTANE ALGAS PROPANE

AMERICAN LIQUID GAS CORPORATION

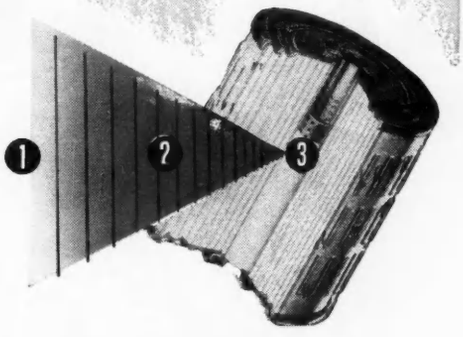
1109 Santa Fe Avenue — Los Angeles 21, California

Torque-Converter Milk Truck

International's new model LB-140 milk delivery truck introduces the new torque-converter coupling which was described in the July issue of CCJ, Page 78. The drop-shaft transmission provides an obstruction free platform. The gvw of this 109-in. wheelbase model is 9000 lb. Body capacity is 44 cases of round bottles or 64 cases of the new square bottles. Power is supplied by International's Silver Diamond 240 engine

"3-Dimension" Filtration

STOPS "DANGER DIRT" TO 2/10 OF ONE MICRON!



Keeps Oil Cleaner *between* Oil Changes

Here's proof of how thoroughly Walker Oil Filters remove dust, dirt, metal particles and other engine-made abrasives from the oil stream . . . proof that Walker keeps oil cleaner in the critical period between oil changes.

Walker "3-Dimension" Filtration actually removes abrasives as small as 2/10 of one micron—gives engines a 25-to-1 safety factor over the danger size of contaminants.

Only Walker has "3-Dimension" Filtration because Walker alone has the patented *Laminar* construction. It can't channel . . . it won't by-pass. It combines into *one* cartridge the three basic essentials of good filtration—surface, depth and progressive—multiple filtration to take out the many, different kinds of oil contamination, including moisture.

Certainly you should change your oil regularly to protect against oil oxidation, dilution and deterioration. But, *equally important*, install new Walker Oil Filter Cartridges on your fleet to keep the oil clean between changes—to give the added protection and greater security of Walker "3-Dimension" Filtration.

WALKER MANUFACTURING COMPANY OF WISCONSIN · RACINE, WISCONSIN

Oil Filters · Exhaust Silencers · Jacks · Lifts

OIL FILTERS

WITH PATENTED *Laminar** CONSTRUCTION

*TRADE MARK

Handling Accident Repeaters

Continued from Page 146

responsibility. Essential reports must be filled out, and the records prepared for the hearing.

The investigation should disclose just what driver errors caused or contributed to the accident, for the basic job now is to prevent repetition of those practices. Was it following too closely, improper practices in backing, weaving in lanes, or cutting in too sharply? Was the driver poorly informed about safe practices, or was the accident due to faulty attitudes? As a general rule, it will be recommended that he return to training for at least one day.

3. *The Hearing.* The hearing is closely related to the investigation, and is a most important step in dealing with the repeater. This hearing should be held as soon as possible after an accident. A good hearing becomes very useful in changing *attitudes*. State motor vehicle departments have also found it a most useful method for handling repeaters.

The hearing should be attended by the following: Superintendent or foreman, fleet supervisor, the union, sometimes the insurance carrier, and the driver. Although it will be conducted informally, enough time should be taken to discuss the case thoroughly; so that all parties concerned will leave the meeting well satisfied. It should be a friendly discussion about what can be done to improve the driver, rather than for the purpose of fixing guilt.

The discussion, in case the driver is found negligent, should be turned in such a way that the driver will leave thoroughly convinced that he has had a square deal and must mend his ways. The union can exert a strong influence on the driver in most fleets.

The question of fines, time off without pay, and the like, will depend upon local practices often related to union contracts.

In all cases, however, the driver should go back to training school for a day or more, or one of the instructors should work with him to improve his practices.

4. *The Clinic.* After the first or repeated accidents, it may be observed that the driver apparently has certain disabilities: Defects of vision or hearing; being poorly informed; nervousness and irritability; or emotional instability. The fleet may have testing devices that can be used for checking these conditions, or they may be checked by the doctor; or the driver may be sent for testing at a psychophysical or medical clinic.

This situation should be handled carefully. For example, if psychophysical tests indicate disabilities, the driver should be referred to an eye specialist. Foremen and safety men should try to be helpful in case of

(TURN TO PAGE 152, PLEASE)

THE

BIEDERMAN

TRUCK

An All-Star Truck
Constructed of All-Star Units
Doing an All-Star Job Since 1920

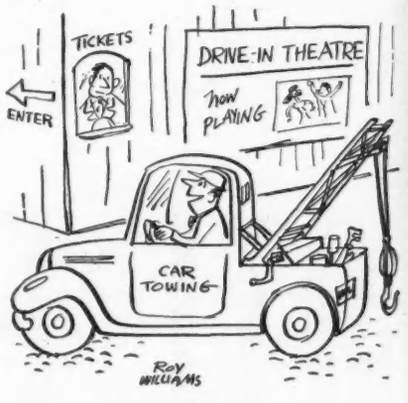
DEALERS: Compare the Biederman National Standard Model with any truck on the market and you will agree that it is an All-Star team in itself.

Only the most sturdily constructed units of America's leading manufacturers are built into it.

Biederman Trucks win by performance. Inquiries regarding dealership solicited.

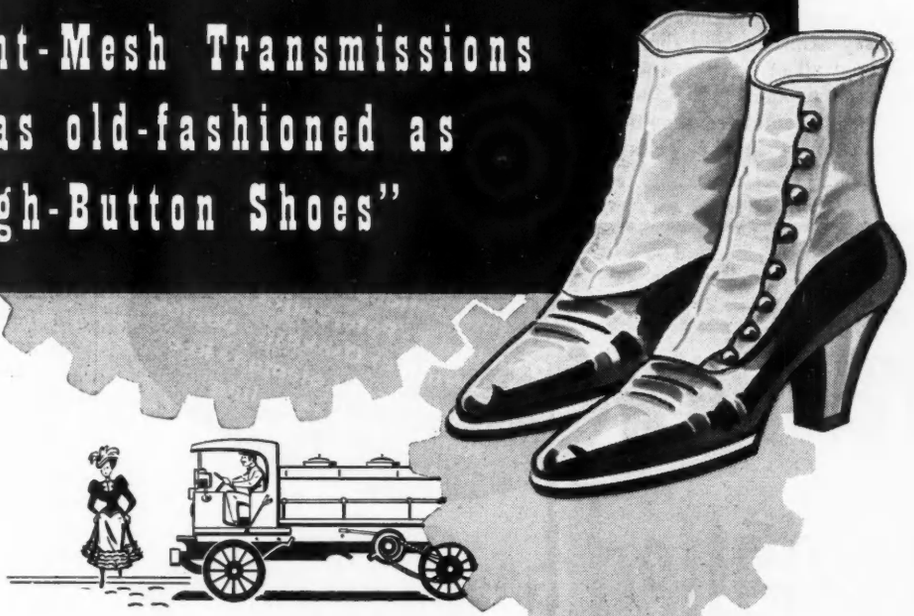
WRITE, WIRE or PHONE

BIEDERMAN MOTORS CORPORATION
CINCINNATI 14, OHIO



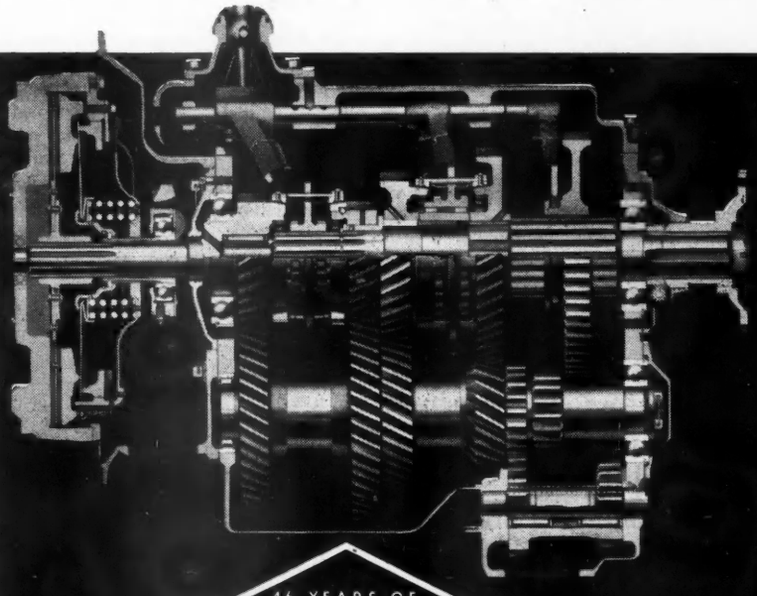
"This the place that advertised for a bouncer,"

"Constant-Mesh Transmissions are as old-fashioned as High-Button Shoes"



—say operators of

Spicer Fully Synchronized Transmissions



The clashing and smashing of gears is as out of date as solid tires. Engine lugging, missed shifts, and excessive slowdown for shifting belong to the days of the hand crank and acetylene lights.

The Spicer *Fully* Synchronized Transmission has eliminated all these inefficient, clumsy driving operations. It is *fully* synchronized in all four top speeds, permitting quick, clean shifts with the lever travelling the same distance every shift. You get fast getaway—shifts are made without slowdown for double-clutching. Fuel savings and lower vehicle upkeep are assured.

Get out of the button-shoe era—streamline your vehicle operation with the Spicer *Fully* Synchronized Transmission.

46 YEARS OF Spicer SERVICE

SPICER MANUFACTURING
Division of Dana Corporation
TOLEDO 1, OHIO

TRANSMISSIONS • PASSENGER CAR AXLES • CLUTCHES • PARISH FRAMES • TORQUE CONVERTERS • FORGINGS
STAMPINGS • UNIVERSAL JOINTS • SPICER "BROWN-LIPE" GEAR BOXES • RAILWAY GENERATOR DRIVES

Handling Accident Repeaters

Continued from Page 150

family or financial difficulties that may result in worries and inattention on the job. This is, likewise, a responsibility of the union. Many accidents can be traced to loss of sleep, worry, heavy drinking, and the like.

Throughout all of this there must be a friendly atmosphere. The foreman and safety representatives should have a genuine interest in the welfare of the men, and they in the safety job of the fleet. All of this makes for good morale, loyalties, and a feeling on the part of the men that they are working for a fine company. Smouldering resentment over injustices, fancied or real, should be aired and cleared up. Don Buck, of the Office of the Army Safety Director, has found in his work in trouble-shooting at Army installations that high accident rates are sometimes due to low morale.

5. *Serious Accident-Repeaters.* The hearing, followed by testing and retraining, will ordinarily do much to cut down repeating. But there will be some instances in which repeated accidents show that a driver can't make the grade. Obviously, when an operator has four or five times the accidents of the average driver for the same mileage, there is something seriously wrong. If this cannot be corrected, he should be shifted to a safer operation or a different job.

6. *Responsibility of the Union.* Throughout this discussion there have been several references to the place of the union. A strong union with thoughtful, intelligent stewards or committeemen can be a great asset in fleet safety. Clearly, the type of program that we have recommended for accident-repeaters is in the best interests of the union, since this program's chief objective is improving the driver. But unfortunately, some unions have never taken the trouble to understand the safety program; although any activity that tends to reduce accidents involving their membership should be of primary importance to union leadership.

END

Please resume your reading on P. 56

Factory Installed

In These Trucks: International • GMC Diamond T • Peterbuilt • Dart Federal • Walter • Oshkosh • Duplex Ward La France • Coleman • Reo Hendrickson • Sterling Available • FWD

At "factory installed" prices you get this Bostrom Hydraulic Seat, the ultimate in truck seating, at lowest cost.

BOSTROM

HYDRAULIC shock absorber and suspension mechanism of the Bostrom seat soak up jolts and jars. Steel frame and bonded rubber pad last the life of the truck. Mechanism moves in rubber—requires no oiling. Fore and aft adjuster accommodates all drivers. Seat coverings are replaced in 10 minutes—eliminating upholstery jobs.

For truck part numbers consult your truck dealer or write:

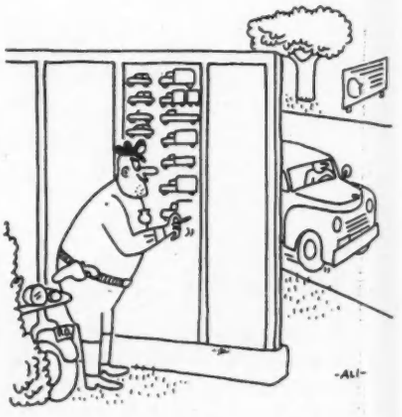
BOSTROM MFG. CO.

Milwaukee 4, Wisconsin

Costs a little more at the start... costs a lot less in the long run.

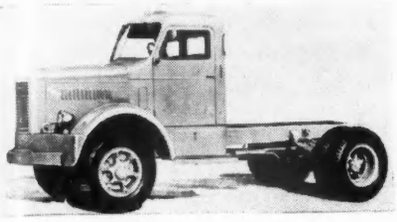
Twin Coach Adds Propane Classes

In response to widespread demand, the Twin Coach Co. will soon add special propane classes to its service school schedule. Complete propane demonstration equipment, cutaway models and visual instruction aids are now being installed at school headquarters. Operators who wish to enroll for propane instruction should contact R. S. Lee, school director, at the Kent, Ohio, plant.



FWD Adds New Engines As Standard Equipment

Increased hp and torque characterize units adopted in both HA and fire engine models



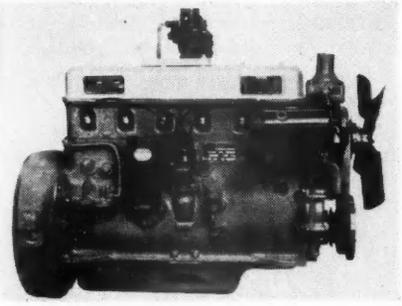
Four-wheel-drive chassis Model HA now using the 195 GKA engine rated at 125 bhp max and developing 245 ft-lb torque

A NEW Waukesha 195 GKA valve-in-head, gasoline engine has been adopted as standard equipment for the Model HA truck manufactured by The Four Wheel Drive Auto Co. of Clintonville, Wis. In addition a dual-ignition, valve-in-head engine, the Waukesha 140 GZB, has been incorporated in the fire engine Models F75T and F50T.

THE new engine in Model HA has both increased hp and torque with a bhp rating of 125 max as compared to 105 bhp in the previous standard engine. The torque rating has been increased from 237 ft-lb to 245 ft-lb.

The 195 GKA engine has a piston displacement of 320 cu-in. with a bore of 4⅛ in. and a stroke of 4 in.

A MAXIMUM torque of 435 ft-lb and 200 max bhp are developed by the Waukesha 140 GZB, new fire engine power plant. The new engine has ten more hp and 25 additional ft-lb of torque than the previous standard engine.



Waukesha 195 GKA engine standard on the FWD Model HA truck chassis. The engine develops 125 bhp and 245 ft-lb torque. Gasoline fuel used should have a minimum of a 75 octane rating

This dual ignition, valve-in-head engine has a piston displacement of 554 cu in., a 4⅝ in. bore and a 5½ in. stroke. Power amplifying combustion chambers feature an improved principle for obtaining increased efficiency and economy.

A NEW DIMENSION IN CLUTCH SERVICE

You get *more miles* of trouble-free service from these new, complete clutch units. Take *less time* to install, too! And you're *sure* of full clutch release and smooth clutch engagement.

Cost the Same . . .

. . . although you pay only the *regular* price for the new Accurate Powerflex clutch plate and the rebuilt Re-Nu assembly, you get the *PLUS VALUES* of a matched, mated, tested, balanced, complete clutch unit at *no extra cost!*

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REPLACEMENT UNIT CO. 1505 Rockwell Ave. Cleveland 14, Ohio

REBUILDERS OF GUARANTEED CLUTCH ASSEMBLIES

Consolidated's Safe Driver Plan

Continued from Page 51

tigation board composed of a terminal manager, a shop foreman, a driver representative and a driver supervisor. The operator involved in the accident can appear before the board to state his version of the report. Consolidated accident boards are situated at Spokane, Wash.; Billings, Mont.; Minneapolis, Minn.; Portland, Ore.; Boise, Idaho; and Oakland, Cal.

After reviewing each accident, the panel rates the mishap as preventable or non-preventable. If the Consolidated driver is held responsible, disciplinary action against him is taken by his unit supervisor. More important in the work of the Consolidated accident review boards is the surveying of accident causes and possibilities of preventing repetition.

A record is kept of each driver's accidents. The form shown in Fig. 9 is used for this purpose.

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Ignition Contacts

FOR HEAVY DUTY FLEET SERVICE

Careful and exhaustive tests have been made to determine for you which Trucks and Cars in Fleet operations should be equipped with HEAVY DUTY Contacts. ECHLIN has the answer and the precision-built Contact replacements to give you extra performance and extra contact life. Ask for the facts and get your copy of the new 1950 ECHLIN Truck & Bus Electrical Parts catalog.

EXTRA TUNGSTEN LIFE

Mirror-finish Tungsten retards collection of dirt . . . guards against arcing, pitting and oxidation.

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Assured by copper Conductor Strip, standard on EVERY ECHLIN Contact.

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CONTACTS COILS • CONDENSERS & OTHER AUTOMOTIVE ELECTRICAL PARTS

ECHLIN MANUFACTURING COMPANY

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Driver Performance Recorded

CONSOLIDATED never loses contact with its drivers. The driver supervisors make frequent spot checks of a driver's habits and driving practices. A weekly report, Fig. 3, is made out on all drivers checked. Any reports made by the inspectors on vehicle condition or driving skill are filled out on the forms shown in Figs. 4 and 5.

A summary of accident frequency, schedule performance, road patrol citations, ICC violations, and other established company driver rating factors are made out for each station. On the basis of these reports, district and company-wide safety awards are made. Forms used for this purpose are shown in Figs. 10 and 11.

Current Safety Problem

DESPITE Consolidated's outstanding safety accomplishments, Max Jensen admits that his company now is having safety difficulties in the long-distance operations. "Our biggest present problem," he recently stated, "is obtaining adequate road safety supervision throughout the entire system, which extends into 11 states, and includes some rather remote regions where the influence of supervision thins out somewhat."

In the handling of this problem of long-distance supervision, the company has five driver supervisors. As stated by Jensen, these supervisors "do nothing but train and re-train drivers, constantly doing everything possible to make them into safer workers."

In this statement, Jensen has used the term "safer workers" advisedly. It summarizes what is a basic principle of company management in the training and promotion of all operating personnel; which includes their localized driver-salesmen and warehousemen, as well as their highway transport operators.

"The success that we have had to date in safe driving," continued Jensen, "we credit in large part to the spirit of team work that always has prevailed in our company. A contributing factor, no doubt, is our policy of promoting supervisors from within and our excellent retirement plan, which encourages a low turn-over in labor.

"The cooperative aspects of our accident review board contribute a great deal to team work, and the drivers themselves have a voice in fixing responsibility for accidents. Also, the same system of penalties is universal throughout the organization, so a transport operator cannot be penalized more

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Safe Driver Plan

Continued from Page 156

in one area than in another for the same offense.

"We have a broad safety recognition program; and we are constantly searching for better operating equipment. Also, it is our constant effort to provide such drivers with the best job available, with a minimum of work inconvenience."

Jensen Started as a Driver

A GOOD illustration of the company promotion policy is afforded by Max Jensen himself. He began with the company in 1929 as a driver from Pendleton, Ore., to Boise, Idaho; and then from Seattle to Wenatchee, Wash. In 1934, he was appointed company agent in Tacoma.

In 1939, he was transferred to the Missoula terminal; and, after one year, promoted to district transport dispatcher in Billings, Mont. Here, he remained until November, 1942, when he began his World War II Army serviec. He was soon a company commander in the overseas area trucking department.

While in Persia, he became a major, serving the trucking supply train to Russia; then, safety director in the Motor Transport Service of Persia Gulf Command. After VE Day, he was moved to Berlin on General Clay's staff, subsequently promoted to Lieutenant Colonel. He was discharged from the Army in August, 1946.

Soon back again with Consolidated, Jensen was appointed superintendent of operations. This job also included the safety supervision of the 450 city drivers and 350 highway drivers then with the company. Recent company expansion has increased these personnel numbers to about 600 city and 500 highway transport operators, with a total of 2600 people on its payroll.

Consolidated Freightways now operates, in three major territorial divisions, more than 12,000 route miles, and does a business of approximately 18 million dollars a year. It has 56 terminals in 10 states. The longest west-east direct haul is 2200 miles from Portland, through Oregon, Washington, Montana, North Dakota, Minnesota, Wisconsin and Illinois to Chicago. At the comparatively new Chicago terminal, a large new servicing and maintenance shop was recently completed.

Seven "Recognition" Activities

AMONG company highway drivers, the safety angle is kept prominent in their training, supervision and promotion. This safety program is being

(TURN TO PAGE 160, PLEASE)

RAISE YOUR LOAD

TWO FEET HIGHER

WITH THE NEW...

AMERICAN

HIGH LIFT

CRANE BLOCK

P.S. It only needs lubrication once every two thousand hours!

GETS YOU OUT OF TIGHT SPOTS...

because it's 1½ to 2 feet shorter than ordinary crane blocks. Often saves adding a boom section. Anti-friction bearings throughout. Sizes 10 to 50 tons; one, two or three sheaves, 18" to 24" diameter.

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COMPANY_____

ADDRESS_____

CITY_____ ZONE___ STATE_____

Safe Driver Plan

Continued from Page 159

stimulated in part through a variety of "recognition" activities now in operation.

These activities include:

1. Annual presentation of National Safety Council awards, usually at a dinner just before the Christmas holidays.

2. Presentation of Consolidated Freightways awards—for a 5-year no-accident record, an engraved gold watch; and for a 10-year no-accident record, a diamond ring. City drivers—Consolidated's driver-salesmen—earn a wool blanket for five years of safety, and a gold watch for 10 years of safe driving.

3. Participation in the national ATA-sponsored "driver of the month" program.

4. Competitions in the annual ATA Roadeo contests; which for 1949, resulted in company truck and trailer champions both in Idaho and California.

5. Company "Top Hand" awards: Each month in the six dispatching districts, an engraved cigarette lighter is presented to the one driver selected as having performed, in behalf of the company, the most outstanding act of courtesy or heroism; or an award for general years-of-service merit.

6. Constant driver training and many group safety meetings.

7. District group safety contest, in which the drivers of a district will select two leaders to pick two competing teams. At the end of the month, the group with the best safety record will sit at one side of a dinner table to eat steak; and the losing group on the other side will eat beans.

Driver Selection and Training

ONE of the new company problems in the selection and training of drivers is the result of Consolidated's recent expansion and the necessity of hiring many new drivers. For this program, the company has standardized the personnel procedures being used at the six different driver selection and training spots. This has included the development of printed forms for the initial guided interview with a new applicant.

First, the driver applicant must have the appearance of being physically fit, within the age bracket of 25 to 40 years, and with enough apparent driving experience to qualify him as a beginner. Then he is asked to read a little leaflet, entitled "*You* are Consolidated Freightways." In part, it states that "When you go to work for Consolidated Freightways, as a transport operator, you are in daily contact with the public, etc."

This reading is to impress the point that, if he should become a driver, the company would be judged by the manner in which he would handle his truck. On his instinctive responses to this general idea, through questioning, he is given an "attitude" rating. If this response seems encouraging, he is asked to fill out a formal application blank. Then will follow a more extended guided interview, during which he will, somewhat, reveal his personality traits, his family background, his employment experience, his general job attitudes.

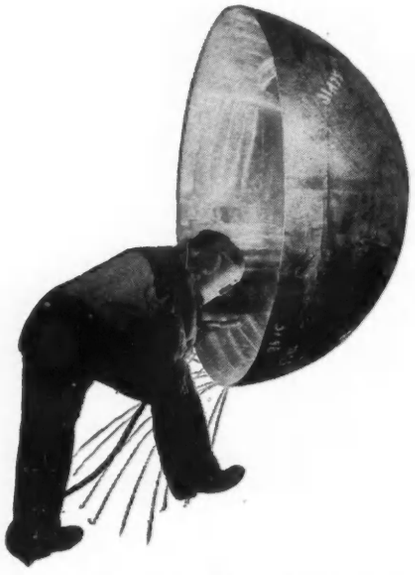
Again he is rated by his interviewer. If these combined ratings seem generally encouraging, when compared with a simplified set-up of the company standards for a new driver employee, the applicant will be given further consideration.

"Paper" Tests Precede Physical

THE company excutives feel that if an applicant is unfit mentally to be a driver, it is a waste of time and money to give him a physical examina-

(TURN TO PAGE 164, PLEASE)

immediately available from stock



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These electrodes are supplied with two types of flux coatings—the heavy extruded lime type, specifically designed for application with DC reversed polarity, and the extruded titania type for AC or DC application.

These electrodes produce a spray type arc of excellent stability. The covering which serves as a flux gives rapid wetting action and completely covers the deposit. Because of this good wetting action, it is possible to produce welds which taper into the base metal, thus eliminating abrupt changes of contour which would be conducive to slag adherence.

For more information about Airco Stainless Steel Electrodes, write your name and address on the margin below, and send it to your nearest Airco office, or authorized dealer for a copy of Catalog ADC-650B.

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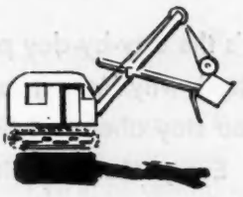
For Fast Economical Replacement on Trucks, Buses, and Farm Equipment

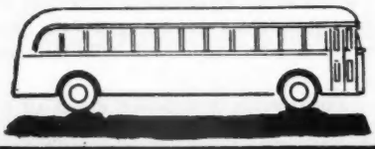
No matter how rugged the motorized equipment, it's no tougher than its high pressure hose lines and hose ends. The NEW Weatherhead hose and hose couplings are rugged and sturdy—designed to replace damaged gasoline, oil, air and hydraulic lines on trucks, buses, tractors, tank trucks, farm machinery, power tools and other heavy duty units.

Full time service for all equipment and low cost inventory is assured by use of these inexpensive replacement parts. A minimum stock of hose ends and random length coils of hose are stored until needed to make a quick, positive and leak-proof connection of any desired length. They're economical because Weatherhead Reusable Hose Ends last through repeated hose changes—keep equipment operating, save costly lay-ups.

See your jobber for complete details or write direct to our Cleveland office for your copy of the NEW J-1503 Catalog describing the various types of Weatherhead Heavy Duty Flexible Hose and Reusable All Steel Hose Ends.

The Weatherhead Company also manufactures the well-known "Q A" (Quick Attachable) Hose Ends for passenger cars and light trucks.





Look Ahead With

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Safe Driver Plan

Continued from Page 160

tion. Therefore, they put applicants for driving positions through several temperament and preference tests before they give them physical examinations.

The intelligence test uncovers a driver's educational background, and his ability to solve problems quickly and accurately. The preference test gives him the opportunity to tell the kinds of jobs that he likes best in the order of his choice. The temperament analysis reveal whether he is ambitious, aggressive, callous, etc.

As a result of these tests, the company has made some enlightening discoveries. One is that a "normal" person makes a better driver than an individual who is exceptionally ambitious or unusually aggressive. The man most successful as a driver is not cold or callous. He usually comes from a family in moderate circumstances.

On an average, the better driver is not the "genius" type of individual who is deeply interested in art or literature. He usually is a man with a natural mechanical turn of mind. Usually, he is not selfish or egotistical. He should be the type who is willing to help other motorists in distress along the highway.

The Consolidated driver must be a man of courage and physical strength to stand up under the strain of long distance driving. Also, he must be mentally alert and resourceful in case of unexpected emergencies.

All tests will result in a simplified one-page rating sheet, to summarize and weigh the several previous ratings. These ratings will record impressions as to: (1) His general attitude toward responsibilities to the public in his highway driving; (2) his basic feeling toward company and job loyalty; (3) his general physical appearance; (4) his family and previous work background.

From these will be computed the applicant's total score. This score will determine whether he seems acceptable for further employment consideration. If so, he then must pass a rigid physical test.

In this test, his eyes will be given special consideration; and company experience demands that these standards be set very high. His eyes must test not over 20/50 without glasses; and before acceptance his vision must be corrected to 20/20.

To supplement this test, and the followup annual eye tests required from all drivers, the company subscribes to an Industrial Vision Service (Bausch & Lomb) which includes the Orthorater test. To accomplish these original eye tests and their annual followup, the company has in use six testing machines.

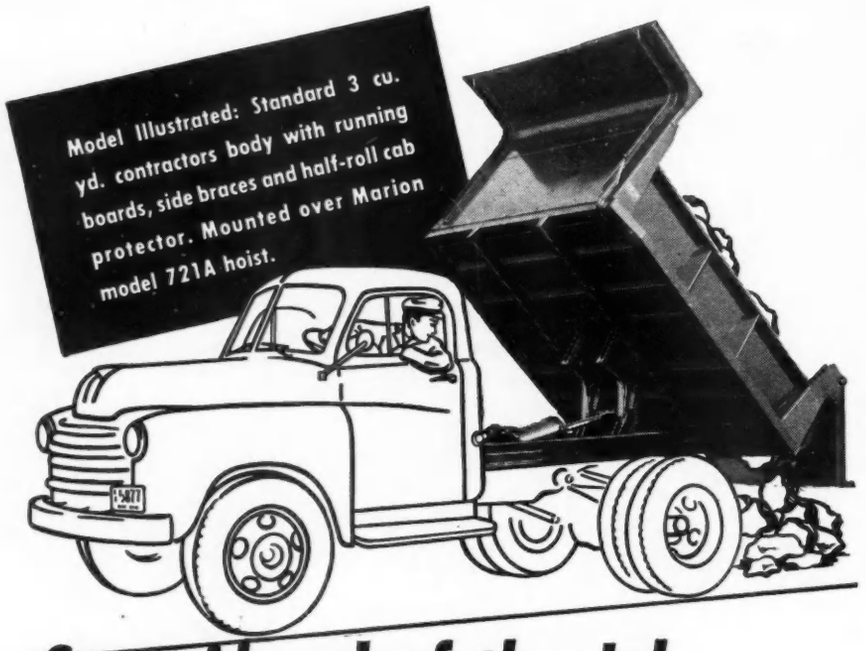
This program in vision testing also is supplemented by regular current profile service received from Purdue (Ind.) University, further to evaluate results from the eye tests.

New Drivers Sign Pledge

AS AN additional procedure, to emphasize the most important company safety and operating policies, the new driver is asked to sign a brief "Transport Operator's Pledge," a copy of which is shown in Fig. 2. This statement is witnessed by the district manager, who hires him.

The pledge comprises a list of nine tersely-written "I will" statements. They summarize the basic employment conditions which include: On-time work regularity; daily checking of assigned equipment; elimination of unnecessary road stops; observation of local traffic laws; keeping safety uppermost in mind; becoming familiar with and observing company policies; upholding company standards in quality service to customers; accurate and complete re-

(TURN TO PAGE 166, PLEASE)


Model Illustrated: Standard 3 cu. yd. contractors body with running boards, side braces and half-roll cab protector. Mounted over Marion model 721A hoist.

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It's the day-by-day performance that counts. That's why Marion Bodies and Hoists will help you stay ahead of the job.

Every Marion unit is designed "On The Job" under actual working conditions. Faster loading and dumping . . . extra pounds on every trip . . . longer service life . . . are engineered into every Marion unit.

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Monmouth Replacement Bearings are produced by The Cleveland Graphite Bronze Company in the world's largest, most modernly equipped engine bearing factory. Millions of dollars invested in a continuous program of engineering research on bearing problems insure perfect performance.

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Monmouth Trade Mark *is the name*

Safe Driver Plan

Continued from Page 164

ports; attention to safety driving practices and safety meetings.

Following company acceptance, the driver must take at least three student trips with a driver trainer. A record of each trip is made out on the form shown in Fig. 6. For six months he is considered on probation.

For personal study and reference, he is given a copy of the 55-page, pocket size, "Transport Operators Manual," shown in Fig. 1. This manual states the general conditions of his employment, driving requirements, and company safety rules.

"No piece of company equipment is ever to be driven faster than 50 miles per hour," the new driver learns from the manual. If violated, this calls for mandatory dismissal. The rule is to be enforced regardless of state regulations, which may permit higher speeds.

To aid in detections, all company road power units are equipped with a recording tachometer to indicate the speed and stops. In addition to the tachometer and the supervisory efforts of the five driver supervisors, previously mentioned, the company subscribes to several state association patrol services and several private patrol services. The insurance carrier also maintains a road observation service. Driver instructions in the operators' manual are not confined to speeding, of course. He also is told, for example, that:

"No piece of equipment shall be coasted down hill out of gear."

"The driver must not follow another truck closer than 1000 ft."

"Any operator on duty, or reporting for duty, with any indication that he has been drinking any alcoholic beverage will be dismissed."

"The company will not pay fines (charged against driver acts) for violation of traffic rules."

"Any operator who carries an unauthorized passenger will be dismissed."

"The right of way must be surrendered, if necessary, to avoid an accident. . . . Remember, that the operator who had the last clear chance to avoid an accident is responsible for it."

And so on.

Periodic Safety Campaigns

THE company does not rely on the driver's memory to keep all rules and safety principles in mind. Periodically, a safety campaign, employing attention-compelling phrases and illustrations, is directed to the operating personnel.

Part of one such campaign is shown in Fig. 7. This consisted of a series of 5½ x 6¼-in. folders, folded to 3⅛ x 5½ in. The theme behind the folders was a refresher of basic principles. It was presented in a question-and-answer manner, and used but one illustration—a cartoon character named "Vigilant Van."

Here is a typical message:

The front fold is worded, "Vigilant Van Says: Why —"

Inside, one half of the area is devoted to a question, and the other half to the answer. This question reads: "Why do more accidents happen in early spring and fall, than in summer and winter?" Under the question, the driver is given these two choices to check as his answer: "The weather is much worse." and "The drivers forget to adjust themselves to changing conditions."

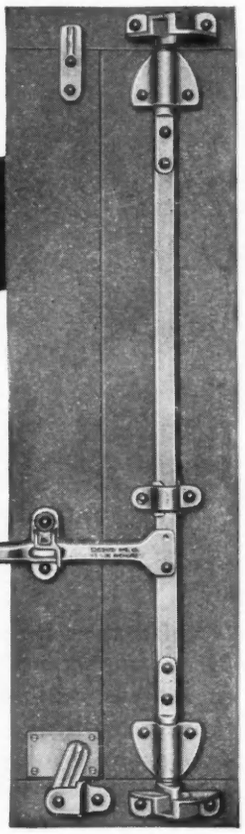
The lower half of the sheet contains the right answer with full emphasis and explanation. "Remember: Weather conditions do not cause accidents. Drivers who fail to think right, and in time, are responsible. A safe driver keeps himself in adjustment to the seasons."

The back fold contains a wash draw-

(TURN TO PAGE 168, PLEASE)

In Response to the Needs of Particular Body Builders

EBERHARD offers 5 NEW DEVELOPMENTS in TRUCKBODY HARDWARE



EBERHARD No. 5624 UNIVERSAL DOOR LOCK (Made Expressly for Heavy Duty Use)

WEB TYPE LOCK HANDLE No. 5621

For use on School Bus Emergency Door. 5/16" Sq. Shank. Horizontal or Vertical mounting. Finish, Plain or Cadmium.

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For use on Small Doors and Compartments. Attached by screws, rivets and welding. 5/16" Sq. hole. Lock case 3"x 1".

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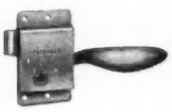

Largely for inside door applications. Attached by screws, rivets or welding.

EVER-GRIP-HARD Door Lock No. 5625

Rugged for Long Service under hard usage. Right or left, single or double doors. Frost seal breaking action.

(Left) The Universal door lock is the answer to your needs for large door applications. Designed and built for strength with smooth operation. Comes with 5/8" Sq. shank streamlined handle, as shown.

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Division of the Eastern Malleable Iron Co. EVARTS AVENUE CLEVELAND, OHIO

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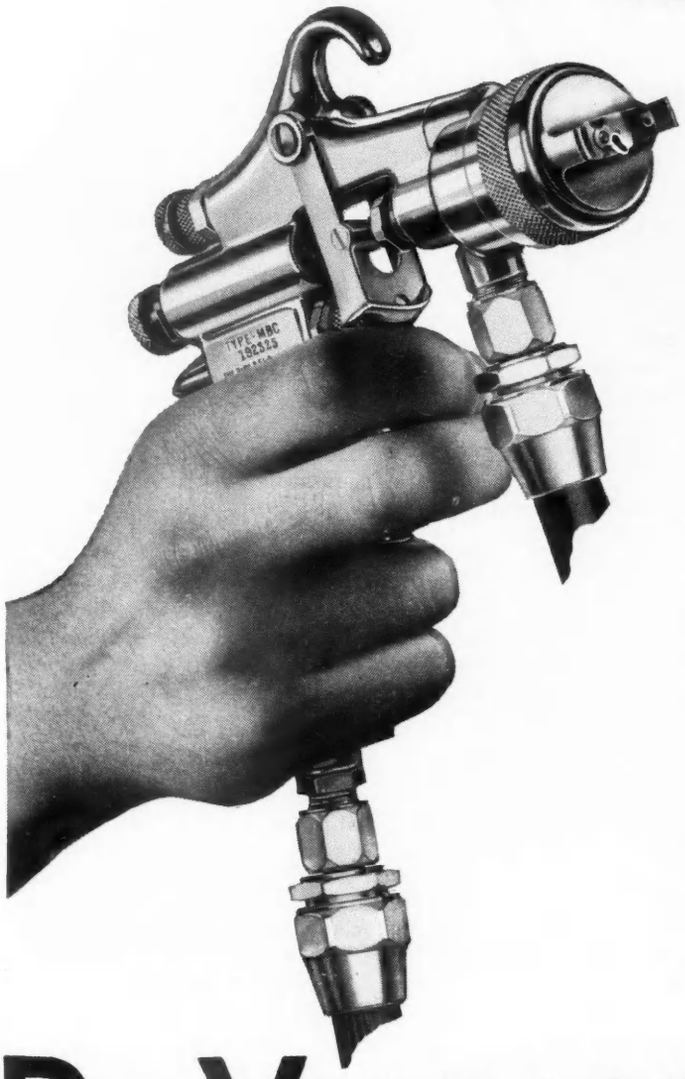

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C-O-TWO ANNOUNCES

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ECONOMICAL, EFFICIENT FIRE PROTECTION
from a single storage tank

C-O-TWO now adds another outstanding contribution to modern fire fighting . . . *C-O-TWO Low Pressure Carbon Dioxide Type Fire Extinguishing Systems.* Carbon dioxide stored in bulk under low pressure, means greater fire protection for your larger size fire hazards at less cost.

Flexibility is the keynote of these new type C-O-TWO Fire Extinguishing Systems . . . the low pressure carbon dioxide storage tanks range in capacities from one to fifty tons, and can be operated as straight manual, partially automatic or fully automatic systems.

Flammable liquids, electrical equipment, storage and manufacturing processes can all be made firesafe from a single low pressure carbon dioxide storage tank. If fire strikes the system quickly goes into operation and the fast-acting, non-damaging carbon dioxide extinguishes the blaze in seconds.

COMPLETE CARBON DIOXIDE FIRE PROTECTION

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Let an experienced C-O-TWO Fire Protection Engineer help you in planning up-to-date, fully approved fire protection now before fire strikes. Complete free information and descriptive literature available on request. Get the facts today!

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Sales and Service in the Principal Cities of United States and Canada

AFFILIATED WITH PYRENE MANUFACTURING COMPANY

Safe Driver Plan

Continued from Page 166

ing of a Consolidated Freightways driver with a broad smile and, beneath, the words:

"YOU are Consolidated Freightways."

This series is so good that a couple of other questions and answers bear mention. There is one that asks :"What is the safest traveling speed?" The driver is given the choice of these answers: "That posted as the legal limit," and "That speed within which the vehicle can be kept under absolute control." The correct answer: "Remember: There are times (icy roads, snow, etc.,) when even 10 miles per hour constitutes reckless driving."

Another folder asks, "Who is adjudged to be responsible for an accident?" The driver chooses, "The driver who was legally wrong," or "The driver who had the last clear chance to avoid the accident and failed to do so." The right answer: "Remember: National Safety Council rules prescribe that the legal decision on an accident has no bearing on whom will be held responsible."

Another effective series is shown in Fig. 8. These folders were prepared on 8½ x 11-in. sheets of colored paper folded twice to 3¾ x 8½ in. It is known as the "This could happen to YOU" series, because each folder contained that wording on the front fold. The series emphasizes the worst side of an accident, pointing to the resulting death and destruction that could have been avoided by safer driving practices.

After opening one of these "This could happen to YOU" folders, the driver may see a line drawing with some wording such as, "Fire Prevention plays a vital part in Safety!" Then he opens the folder to its full size and sees a large photographic reproduction of a tractor-trailer burning. Below is the cartoon character Vigilant Van and this typical message: " 'I'll Take Mine Well Done'—and this outfit is really just that. Do you know that equipment fires, in practically all instances, are caused by one of three things:

"1. Flat tires?

"2. Smoking in equipment?

"3. Shorts in electrical wiring?

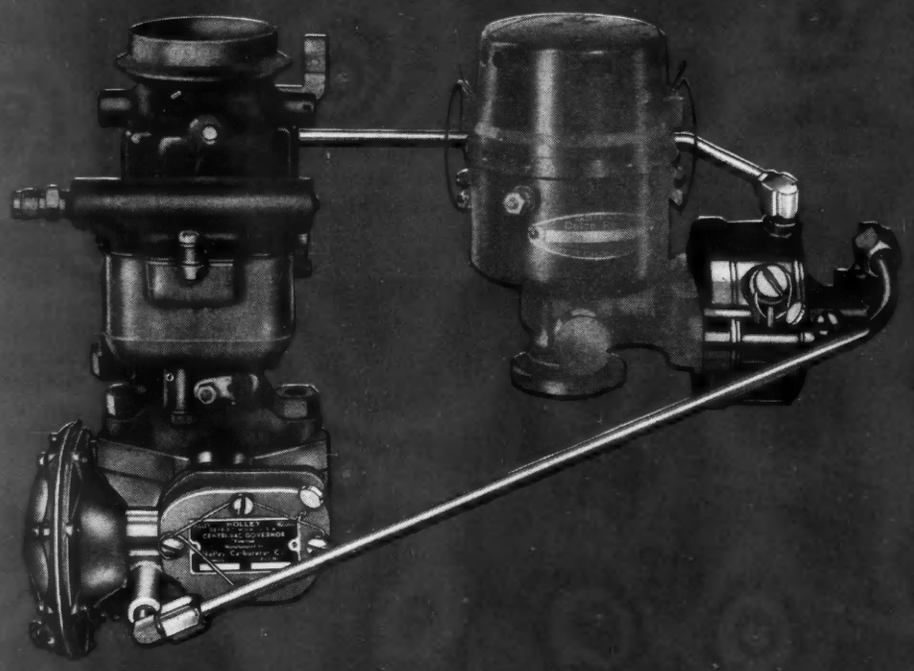
"Running tires flat, long enough to cause a fire, is something *professional drivers* just don't do. Rattling lock rims, extra hard pulling equipment, equipment that doesn't handle properly and feels as if listing to one side are all indications that tires may be flat. *Be sure to heed these warnings.*

"Smoking in van bodies is strictly forbidden—don't do it, and correct anyone you see doing it.

(TURN TO PAGE 170, PLEASE)

HOLLEY *Centrivac* GOVERNORS

COMBINED WITH DELCO-REMY DISTRIBUTORS



The Most Advanced Type of Economical Governor Control

IMPROVED SPEED REGULATION: The new Holley Centrivac Governor is operated by a vacuum powered diaphragm which is controlled by a centrifugal air valve mounted on side of distributor. This insures more even flow of power—a higher economy factor—improved engine performance.

FASTER ACCELERATION—NO SURGING: The Holley Governor design permits the engine to accelerate normally, since the governor throttle remains *wide open* up to the desired speed control. This feature eliminates engine surging with definite improvement of truck operation—less wear and tear on drivers' nerves.

REDUCES POWER LOSS: The Holley Governor cannot choke the engine when pulling heavy loads up hills because the throttle remains wide open until the speed control point is reached. This reduces power loss, improves operating efficiency.

ECONOMICALLY INSTALLED: Due to its new and revolutionary design, the Holley Centrivac Sandwich Governor can be installed on most popular truck engines without need for special drive, linkage, or adapter accessories. Only one piece of metal tubing is used, connecting governor control valve with the governor mechanism.

NOW
CHOICE OF THE LEADERS

STANDARD EQUIPMENT ON

AUTOCAR • CHECKER BUS • FORD TRUCKS • GENERAL AMERICAN AEROCOACH • GENERAL MOTORS TRUCK AND COACH FLEXIBLE BUS • INTERNATIONAL HARVESTER • MOTOR COACH INDUSTRIES • REO MOTORS, INC. • TWIN COACH UNITED STATES ARMY • WHITE MOTOR CO.

ALSO AVAILABLE FOR
ALL OTHER POPULAR MAKES OF TRUCKS

HOLLEY *Carburetor Co.*

5930 VANCOUVER AVE.
DETROIT 8, MICHIGAN

AUTOMOTIVE EQUIPMENT AND ACCESSORIES

Safe Driver Plan

Continued from Page 168

"In order to cope with a fire, regardless of cause or type, know how to operate the fire extinguisher. If in doubt, ask your supervisor."

To give this series added punch, the messages are written around actual accidents that occurred to drivers.

Employee Paper Aids Safety

THE company always has made a special effort to promote the spirit of team-work not only among transport operators but among all employees, with the feeling that this spirit also is in the interest of accident control. One of the most important means of promotion is the publication, every two weeks, of a lively four-page company house-organ called "Action." It uses short news items and a lot of pictures and cartoons, to feature company progress, personnel activities and honors achieved by company employees. These activities especially include driver safety meetings and awards.

Thus, it becomes transcontinental news when a Consolidated driver receives an engraved gold watch as a 5-year safety award; or a diamond ring for a 10-year no-accident record; likewise, the annual presentation of National Safety Council awards. Also it is news, often illustrated with a photograph, when a localized group of transport operators, as losers in a month safety contest, are obliged to eat beans, across the table from the winning group eating steak.

As an example of how the publication builds loyalty and good will, the editor described some of its services for its drivers under the heading: "What Makes a Job Good?" He told how an executive of the line sent a check for $235,907.87 to pay the annual premium on the employees' retirement insurance.

He also enumerated some of the exceptional things that the company was doing to improve jobs. He pointed out, for example, that 296 units had been added, and the average annual wages per employee had been increased $300 in the year. In addition, he pointed out that over 250 employee meetings were held to discuss problems, explain policies and instruct drivers and the personnel in the best way of handling their jobs. Furthermore, he mentioned that more than 300 new jobs were provided; that all earnings (except $50,000 required to pay a year's dividends on preferred stock) were used to improve the company's equipment and facilities, thus creating more and better jobs. He pointed out that the company always tries to advance their own drivers and other employees from within. The only exception to this is when it hires an outside specialist for a specialized job which can not be filled in their own ranks.

Employees Offered Stock

IN ORDER to encourage drivers and other employees to take a deeper interest in the operation of the company, the management announced last year that all Freighters who had been with the organization three or more years were eligible to purchase up to 10 units of stock. Each unit consisting of one share of preferred and 20 shares of common, could be purchased for $200 and could be paid for, by means of payroll deduction. J. L. S. Snead, Sr., secretary of the company, was asked by the management to act as trustee of the money to be paid under the plan by the employees and to act as their agent in dealing with owners of the stock.

Mr. Snead sent a letter to all Freighters with three or more years of service with the company explaining the plan together with an offer-to-purchase form by which the employee could subscribe

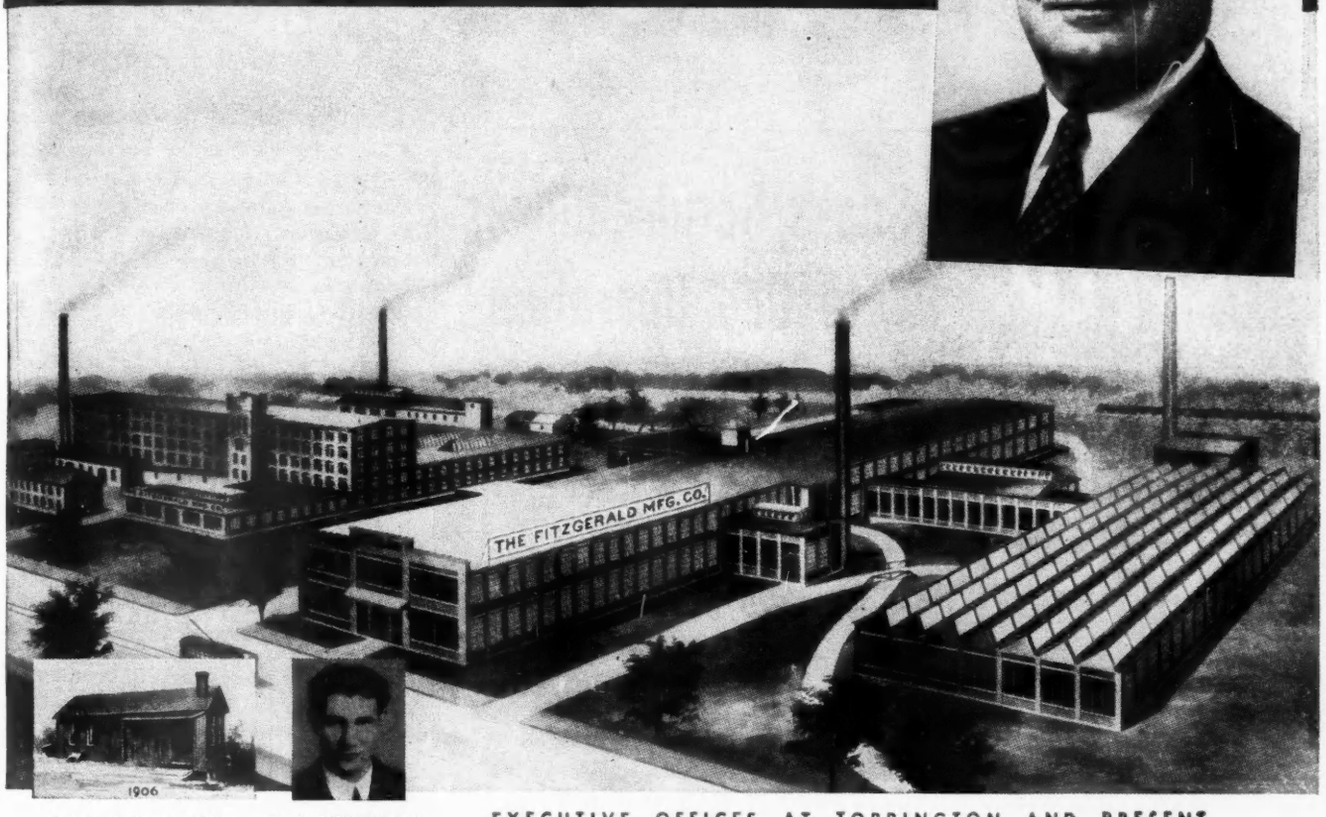
(TURN TO PAGE 172, PLEASE)

TINCHER
Alloy-Seal
ENGINEERED FOR HIGH COMPRESSION ENGINES
FOR REPAIRING CRACKS IN ENGINE BLOCKS AND HEADS
FAST . . . EFFECTIVE . . . LASTING
TINCHER PRODUCTS COMPANY
SYCAMORE, ILLINOIS, U. S. A.
WHOLLY OWNED SUBSIDIARY OF IDEAL INDUSTRIES, INC.
used by leading engine builders
The very best you can use!
SEE YOUR JOBBER OR WRITE
TINCHER PRODUCTS COMPANY
WHOLLY OWNED SUBSIDIARY OF IDEAL INDUSTRIES, INCORPORATED
SYCAMORE, ILLINOIS

See with Fitzgerald...

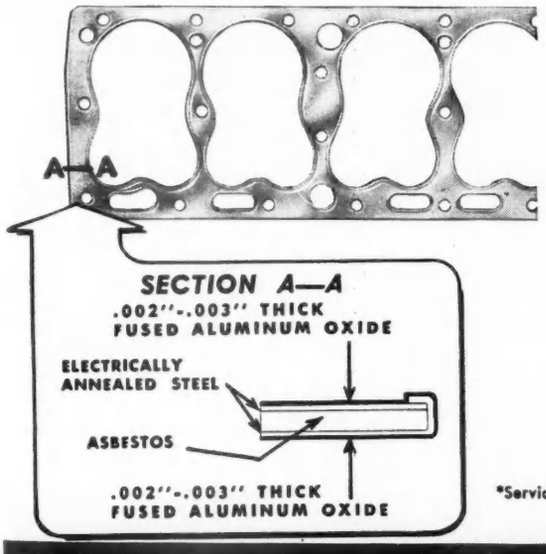
FOR PROGRESS IN GASKETS

P. J. FITZGERALD President — 1950



Original Plant—1906 P. J. FITZGERALD
Floor Space about 250 sq. ft. Founder—1906

EXECUTIVE OFFICES AT TORRINGTON AND PRESENT FACTORIES AT TORRINGTON AND WINSTED, CONN., U.S.A.



Nearly half a century ago, in 1906, I made my first gaskets... for the Breechblock Spark Plug, which some of you may remember. Today our new 341-page general catalog No. 50, just off the press, lists about 15,000 gaskets for approximately 40,000 applications . . . in addition to the many items in our new Grease Retainer Catalog No. 4-50. It's *a truly complete line,* headed by Fitzgerald Metallic Aluminum-Fused-Oxide Steel Asbestos Gaskets*.

These, our newest, are specially designed to withstand the heat and pressures developed in today's high compression engines — gasoline or diesel. Thousands of people have turned to them to avoid the high costs of gasket failures. Try them yourself.

President

THE FITZGERALD MANUFACTURING COMPANY
Torrington, Connecticut

*Service Mark Registration Pending.

THERE'S A FITZGERALD GASKET FOR EVERY ENGINE
Cork Gaskets
COMPLETE SETS FOR MOTOR REBUILDERS

Franchised distributorships now available to qualified jobbers in a few areas. Write for information.

Safe Driver Plan

Continued from Page 170

for up to 10 units of stock. October 17, 1949, was set as the deadline date for sending the filled out offer-to-purchase form to Mr. Snead.

The company's publication cooperated with a news item mentioning that because mailing lists as large as those maintained by the company were seldom complete, and that those who had not received their offer by mail should get in touch with the management.

After the campaign, one of the company officials said, in a bulletin to the drivers and other employees, "Stock offer is a sell-out in record time.

"Before traveling onward at our usual rapid pace, let's pause a moment to take another look at a date that's not far behind us: October 14, 1949. Remember? It was a Friday and, in some respects, an ordinary and uneventful day. But we want you to remember that date because, in an unobstrusive way, it marked a turning point in the affairs of Consolidated Freightways. For on that day, a substantial number of Freighters became owners of a substantial part of their company. On October 14, 1949, the last remaining units of 1000 unit offer of Consolidated Freightways stock was taken up by employees.

"This event marked the successful fruition of a stock purchase plan under which employees were enabled to buy at an attractive price, a large block of Consolidated stock owned by an outside company. This block consisted of 1000 shares of Consolidated First Preferred and 20,000 shares of the new Consolidated Common. The entire block of stock was bought by Freighters."

Safety-Minded Maintenance

IN PART because of the many required long runs, Consolidated Freightways gives special consideration to mechanical maintenance. One distance example is the 2200- to 2500-mile haul from Portland, Seattle and Oakland to Chicago. Additional comparatively long runs are from Seattle or Portland to Oakland, Cal.; and from Seattle or Portland to Salt Lake City. Thus, because of the company division routing methods, when a truck leaves the base shop in Portland, it may have 20 to 30 different drivers before its return to this shop, where most of the heavy maintenance and overhaul work is handled.

Thus, both from the viewpoint of driver safety and operating efficiency, it is company policy to operate only high-grade standardized equipment, and to maintain it as uniformly as possible.

A recent important step in this direction has been the company postwar program of 100 per cent standardization on its present large now Freightliners, including new c.o.e.s trucks, and new insulated and refrigerated aluminum-body semi- and full trailers.

To achieve the highest practicable degree of driver efficiency and comfort, the company is constantly searching for better cab seating arrangement and convenience. This has included driver comfort improvements in heating and ventilation, easier riding quality, more vision, safer steering, better brakes.

As stated by Max Jensen, "We want everything that will contribute toward the comfort of the driver, as we feel that safety operation depends to a great extent on the well-being of the driver in his place of work which is, of course, the cab."

Driver Obligations

ON THE other hand, Consolidated Freightways expects much from its drivers. At the start of any run, the driver must make a thorough initial inspection of his assigned equipment, to

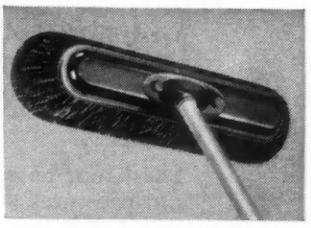
(TURN TO PAGE 176, PLEASE)

SPEED WASH

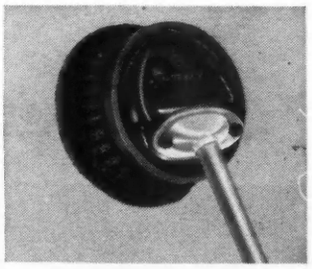
Soaks, Scrubs, Rinses In One Operation!

Picture the Savings!

There's no tool that cuts washing costs like a Speed Wash fountain brush. Clean, fresh water is constantly fed to the surface. Tufts of Nylon and Horsehair protect the finish. Tufts are hand-stitched with rust-proof wire for long service. Block is covered with a sturdy steel back, yet brush weighs only 40 ounces for easy handling. Five foot handle is detachable. Brush head is economical to replace. Write for full details today.



Oblong Speed Wash for Heavy Duty Trucks, $11.75



Round Speed Wash for Light Trucks, $14.25

Milwaukee Dustless Brush Co.
530 N. 22nd St., Milwaukee 3, Wis.

ANNOUNCES . . .

TWO GREAT SERVICE LINES *get together* TO SERVE YOU BETTER

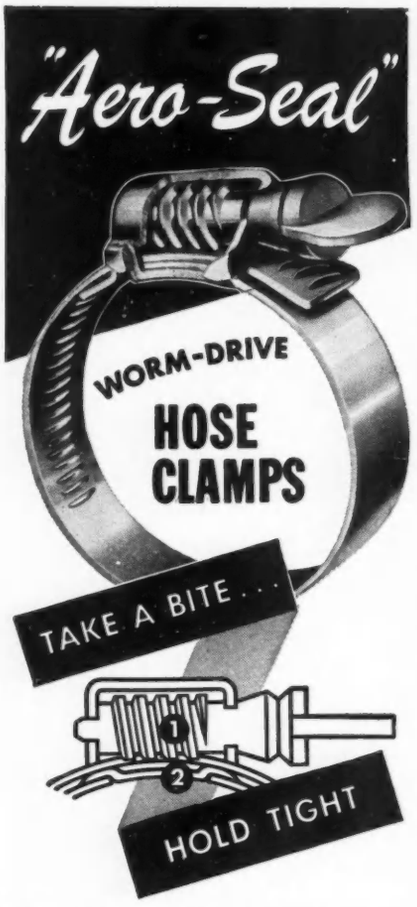
The Bower line of tapered roller bearings gives you excellent coverage of your replacement requirements. In addition, the line of Bower straight roller bearings covers replacement on popular numbers.

Bower roller bearings—famous for their outstanding quality and precision—are widely used as original equipment on cars, trucks, buses, tractors, aircraft and farm implements, and in many other industries. For service replacement they offer you the same high quality and dependability.

From your Federal-Mogul Jobber, through our 60 U.S. branches—conveniently located for prompt delivery wherever you may be—you can enjoy this complete service . . . Bower tapered and straight roller bearings . . . Federal-Mogul engine bearings.

FEDERAL Mogul

FEDERAL-MOGUL SERVICE, DETROIT 13, MICHIGAN



❶ At least 3 hardened steel threads always engaged in worm drive action in slotted band.

Clamp unscrews easily but will never work loose.

❷ Worm threads cannot touch or damage hose—curved saddle assures uniform sealing pressure around complete circumference.

- Long Life — use again and again
- Integral construction — no parts to lose
- Stainless steel bands resist corrosion
- Two types—screwdriver slot or thumb grip

WRITE TODAY for **FREE SAMPLE**

ANOTHER BREEZE MARK PRODUCT

"Aero-Seal"® HOSE CLAMPS

BREEZE CORPORATIONS, INC.
45 South Sixth Street, Newark, N. J.

Safe Driver Plan

Continued from Page 172

comply with ICC regulations and also the additional company safety requirements. Then he is expected to make at least one intermediate road inspection during an assigned run; which will include tires, air connections, lights, and in some cases oil level in the crank case. Company regulations require that these check stops be made at the same designated way-points on all runs. This is so the company insurance carrier also may make its scheduled inspections here, without the necessity of an additional stop by the equipment. Otherwise, the company does not have on its runs any so-called "rest periods."

A transport operator also is expected to handle any road repairs that may come within the limits of his emergency tools and capabilities. This might include adjustment of brakes, tightening of injector lines, replacing light bulbs, changing tires, tightening loose electrical connections. Along the company runs, there are dispatchers and agents with authority to authorize additional possible emergency repairs. In general, a driver in need of road emergency mechanical assistance will call either the Portland main shop or an outlying recovery shop.

Jensen would like to see the motor trucking industry start three activities to help promote national highway safety. First, exchange safety information regarding the "roving" type of reckless drivers. Second, develop more uniform practices in driver selection and training. Third, through state associations, develop road-patrol services really constructive for the entire trucking industry.

END

Please resume your reading on P. 52

Safety Regulations & Effects

Sparton Automotive Div. of Sparks-Withington Co. is spearheading a movement toward uniform safety regulations in all states. The company points out that some states are far ahead of others in requiring safety equipment such as turn signals, head, tail and stop lamps, reflectors, signal lights and so forth to meet definite specifications and to be approved by testing laboratories. They point out that Michigan, for example, with one of the weakest safety codes in the nation had the highest accident rate in the country over the Memorial Day and Fourth of July holidays, whereas states like New Hampshire, New York, New Jersey and Pennsylvania with strict safety laws had extremely low fatality records during the same period. The program still is in the formative stage and the company hopes to arouse public opinion behind legislation for greater strengthening and making uniform traffic regulations in all states.

Budd Wheel Distributors

AKRON—Motor Rim Manufacturers Co.
ALBANY—Wheels, Incorporated
ALBUQUERQUE—Wheels & Brakes, Inc.
ATLANTA—Harris Automotive Service, Inc.
BALTIMORE—R. W. Norris & Sons, Inc.
BIRMINGHAM—Cruse-Crawford Wheel & Rim Co.
BOSTON—New England Wheel & Rim Co.
BUFFALO—Frey, the Wheelman, Inc.
CHARLOTTE—Carolina Rim & Wheel Co.
CHICAGO—Stone Wheel, Inc.
CINCINNATI—Rim & Wheel Service, Inc.
CLEVELAND—Motor Rim Manufacturers Co.
COLUMBUS—Hayes Wheel & Spring Service
DALLAS—Southwest Wheel, Inc.
DAVENPORT—Stone Wheel, Inc.
DAYTON—Rim & Wheel Service, Inc.
DENVER—Quinn & McGill Motor Supply Co.
DES MOINES—Des Moines Wheel & Rim Co.
DETROIT—H. & H. Wheel Service, Inc.
EVANSVILLE—Auto Wheel & Rim Service Co., Inc.
FARGO—Wheel Service Company
FORT WAYNE—Wheel & Rim Sales Co.
GRAND RAPIDS—Rim & Wheel Service Co.
HARRISBURG—Standard Wheel & Rim Co.
HARTFORD—Connecticut Wheel & Rim Co.
HOUSTON—Southwest Wheel & Equipment
INDIANAPOLIS—Indiana Wheel & Rim Co.
JACKSONVILLE—Southeast Wheel & Rim Co.
KANSAS CITY—Borbein, Young & Co.
KNOXVILLE—Harris Automotive Service, Inc.
LOS ANGELES—Wheel Industries, Inc.
LOUISVILLE—Auto Wheel & Rim Service
MEMPHIS—Beller Wheel, Brake & Supply Co.
MILWAUKEE—Stone Manufacturing Co.
MOLINE—Mutual Wheel Co.
NASHVILLE—Beller Wheel, Brake & Supply Co.
NEWARK—Automotive Safety Inc.
NEW HAVEN—Connecticut Wheel & Rim Co.
NEW ORLEANS—Southern Wheel & Rim Co.
NEW YORK—Wheels, Incorporated
OKLAHOMA CITY—Southwest Wheel, Inc.
OMAHA—Morgan Wheel & Equipment Co., Inc.
PEORIA—Peoria Wheel & Rim Co.
PHILADELPHIA—Thomas Wheel & Rim Company
PITTSBURGH—Wheel & Rim Sales Co.
PORTLAND—Six Robblees', Inc.
PROVIDENCE—New England Wheel & Rim Company
RALEIGH—Carolina Rim & Wheel Co.
RICHMOND—Dixie Wheel Co.
ROCHESTER—Frey, the Wheelman, Inc.
SALT LAKE CITY—Henderson Rim & Wheel Service
SAN ANTONIO—Southwest Wheel & Equipment
SAN FRANCISCO—Wheel Industries, Inc.
SEATTLE—Six Robblees', Inc.
SOUTH BEND—Wire & Disc Wheel Sales & Service
SPOKANE—Bearing & Rim Supply Co.
SPRINGFIELD, ILL.—Illinois Wheel & Rim Co.
SPRINGFIELD, MO.—Borbein, Young & Co.
ST. LOUIS—Borbein, Young & Co.
ST. PAUL—Wheel Service Co.
SYRACUSE—Colbourn Wheel & Rim Service, Inc.
TACOMA—Six Robblees', Inc.
TOLEDO—Wheel & Rim Sales Co.
WICHITA—Borbein, Young & Co.

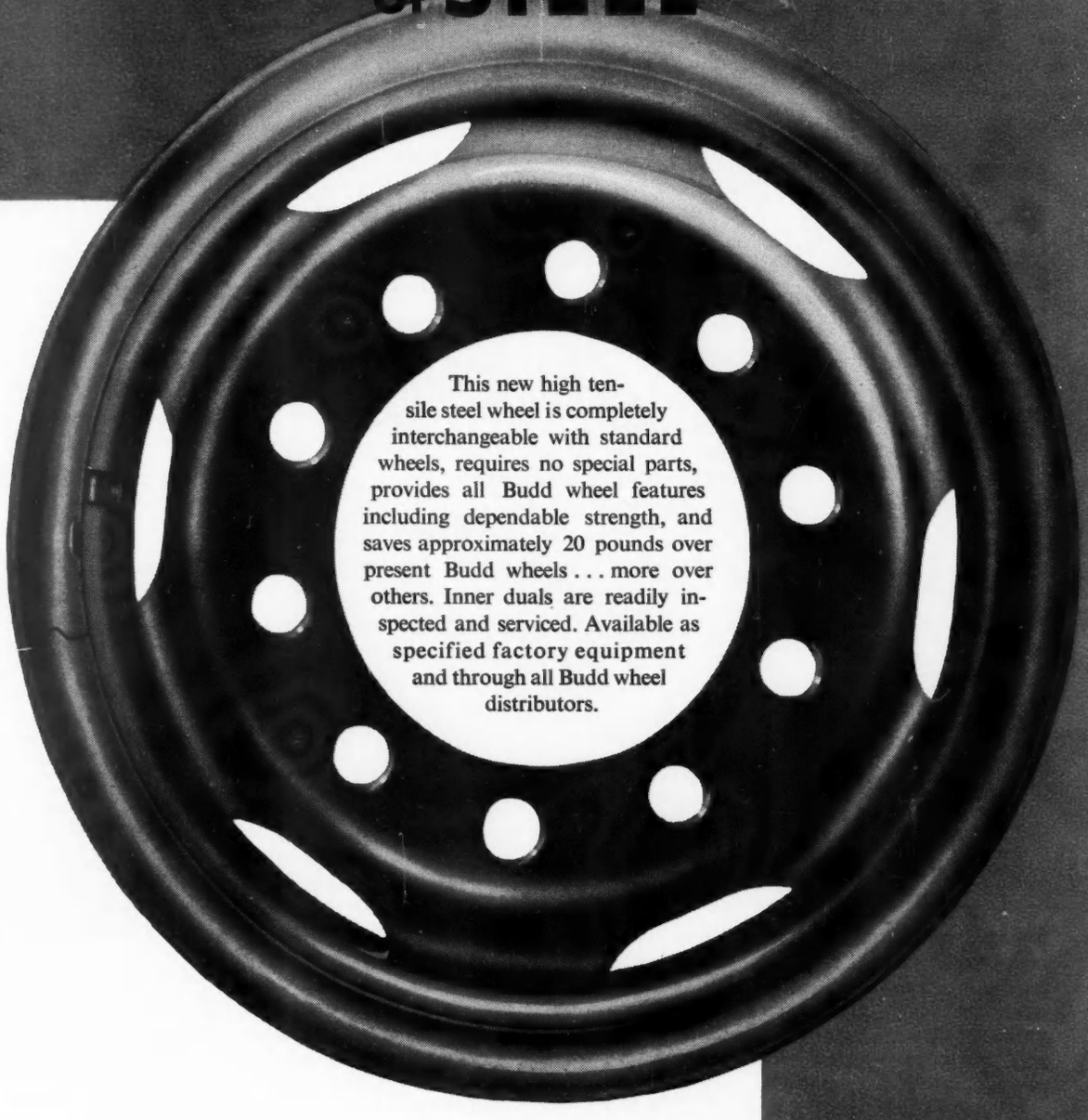
EXPORT

CLEVELAND—C. O. Brandes, Inc.

CANADA

CALGARY—Fisk Tire Service Ltd.
EDMONTON—Alberta Wheel Distributors, Ltd.
MONTREAL—General Automobile Equipment Ltd.
TORONTO—Wheel & Rim Co. of Canada, Ltd.
VANCOUVER—Wheels & Equipment, Ltd.
WINNIPEG—Ft. Garry Tire Service Ltd.

Budd Introduces New Lightweight Wheel of STEEL



This new high tensile steel wheel is completely interchangeable with standard wheels, requires no special parts, provides all Budd wheel features including dependable strength, and saves approximately 20 pounds over present Budd wheels . . . more over others. Inner duals are readily inspected and serviced. Available as specified factory equipment and through all Budd wheel distributors.

The Budd Company, Detroit 14.

Budd

The Right Wash-Up Equipment

Continued from Page 64

about one minute. With a reduction of washing costs and the ease of getting over equipment, improved appearance results. However, this machine will not wash the ends, although the sprays may be set to an angle to help flush off some of the dirt. Again such power washers cannot do a thorough job on irregular contours.

The Blackhall standard side washer built by Ross & White for buses, trolley coaches and similar equipment utilizes a pair of brushes on each side of the vehicle runway, one of these brushes being a body brush approximately 9 ft long and the other a window brush about 4 ft long. The side brushes are driven by 3 hp motors and the window brushes by 2 hp, all drives being by means of V belts mounted in such a manner as to permit quick replacement of belts if required without dismantling of any part of the washer equipment other than the loosening of bolts in the motor base plate.

The window brush operates on a short pair of arms inside of the long arms for the body brush and each pair of brushes is supported on a single column on each side of the runway so as to permit the installation of the washer in the least possible space. Washer is usually operated automatically using an electric eye for starting of brushes and turning on the water through an automatic water valve and stopping the brushes and cutting off the water by means of a timing relay after the proper time for washing the bus has elapsed.

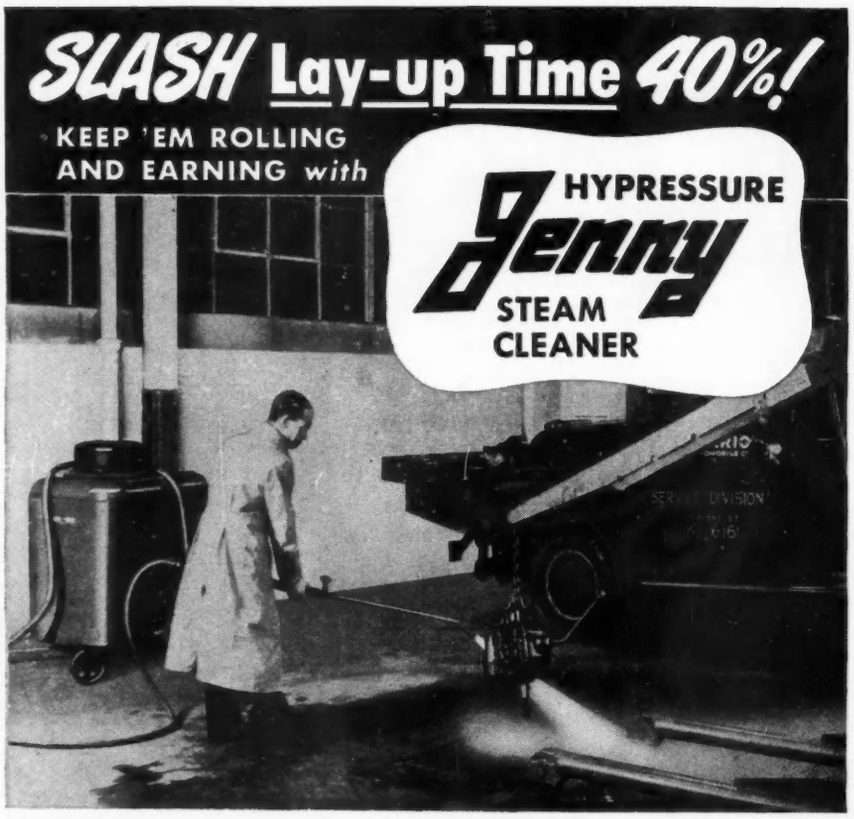
Equipment may be washed at the rate of about one foot per second or for a bus 50 ft long, there should be consumed for the best washing results about one minute in passing the bus through the washer.

Fountain brushes are used in conjunction with conventional washers to reach inaccessible spots. This one is made by Milwaukee Dustless

A portable mechanical washer developed by Ross and White is mounted on a truck fork lift. The unit consists of a gasoline engine which drives a rotary brush held against the truck, bus or trailer body. Water is carried on the unit in a 250-gal tank.

Due to the short turning radius of the lift truck the mounted washer can move uninterrupted around the corners of the bodies, reaching front and rear. Thus a 35-ft trailer can be completely washed in less than

(TURN TO PAGE 180, PLEASE)



Steam cleaning your automotive equipment before repair or overhaul jobs, reduces shop time by as much as 40%. That means 40% quicker return to service—more pay mileage—more profits for you!

Hypressure Jenny removes grease and road dirt from chassis, motors and parts in one-tenth the time, and at far less cost than old-fashioned bucket—scraper—and solvent cleaning methods. It cleans and exposes lubrication points for servicing . . . reveals damaged or worn parts for repair before road failures occur . . . keeps your shop and garage floors, runways, lifts, pits, tools, machinery, walls, windows, etc., thoroughly clean for most efficient work.

There is a Hypressure Jenny model to suit your requirements, at a price to suit your purse.

Write today for this FREE BOOKLET, "1001 WAYS TO EXTRA PROFITS." It tells how Hypressure Jenny will help keep your fleet rolling and earning by speeding maintenance . . . saving time, labor, expense.

There's a Hypressure Jenny for every mill, mine, factory, farm, and automotive need!

HYPRESSURE JENNY DIVISION
Homestead Valve Manufacturing Co.
P. O. Box 90 "Serving Since 1892" Coraopolis, Pa.

Safe Steering in Emergencies with

When forced off the road onto rutted, soft, rocky or snow-banked shoulders, your driver will be grateful for Vickers Hydraulic Power Steering. The steering mechanism is then hydraulically locked against road condition reaction . . . the vehicle cannot swerve from road reaction. There is no "wheel fight" to wrench the steering wheel out of the driver's hands. Pull back onto the road requires only the "force of a finger" on the steering wheel.

Vickers Hydraulic Power Steering is safer . . . effortless . . . provides hydraulic power at instant command of the driver to meet any and all steering requirements. This extra-quick steering greatly increases the ability to maneuver in an emergency. Another important advantage . . . the driver is less tired, more alert.

Vickers Hydraulic Power Steering can be used as original equipment, or adapted to most trucks and other vehicles now in service. Write for Bulletins 47-30 and 49-52 covering additional advantages and specifications.

VICKERS Incorporated
DIVISION OF SPERRY CORPORATION
1418 OAKMAN BLVD. • DETROIT 32, MICH.

Application Engineering Offices: ATLANTA • CHICAGO • CINCINNATI • CLEVELAND DETROIT • HOUSTON • LOS ANGELES (Metropolitan) • MILWAUKEE • NEW YORK (Metropolitan) • PHILADELPHIA • PITTSBURGH • ROCHESTER • ROCKFORD ST. LOUIS • SEATTLE • TULSA • WASHINGTON • WORCESTER

VICKERS Hydraulic POWER STEERING

Vickers Hydraulic Steering Booster with Integral Overload Relief Valve. Bulletin 47-30a.

Vickers Balanced Vane Type Pump Is Engine Driven. Bulletins 36-12 and 49-52.

Vickers Hydraulic Power Steering is Effortless, Positive, Shockless

4068

ENGINEERS AND BUILDERS OF OIL HYDRAULIC EQUIPMENT SINCE 1921

Wash-Up Equipment

Continued from Page 178

two minutes, and eight to ten large trailers can be washed with one tank of water. The lift truck can be removed from the washer in a matter of minutes, and the machine can be transported to other areas when needed.

Advantages of this unit are flexibility, complete washing ability, maneuverability, speed and savings in water. It is recognized, however, that initial cost of the machine will be substantially greater than more simple types, and that volume of work will determine in most cases the advisability of purchasing this kind of washer.

Another type of automatic vehicle washer developed by U. S. Washmobile consists of a nozzle equipped arm which rolls on its own track the length of the vehicle. This unit covers 1200 ft in 20 sec, providing a uniform spray of soap and water.

A light panel truck can be washed in this manner in 8 to 10 minutes, while a tractor and 35-ft trailer combination can be covered in 15 to 20 minutes. Another advantage is the fact that this washer can be installed in the present wash rack, requiring no more additional space than present washing facilities.

Another portable washer of the built-in spray type has been made by Phillips Pump and Tank Co. It is designed to be placed midway over the vehicle so that the pivoted spray arm is swung over the truck from left to right in a 180 deg arc, to cover it with solution and clear water in successive operations.

While designed for passenger cars and light equipment, the Wavewash can be adapted to larger equipment with slight modifications. Advantage of this machine is the fact that water spray can be directed at any part of the vehicle. Space required for mounting the machine is small.

Power Washers

THERE is another type of washer which may fill the requirements of many fleets. This is the motor driven pressure system with application gun with which a stream of spray water, foam, detergent or rinse is applied to the vehicle by one man. This machine represents a low outlay of capital, and will do the job on smaller

The Laco brush made by Laitner Brush Co. is available in several types and sizes to fit individual needs. Several bristle types are also available for use with detergents and soaps

equipment. Many manufacturers do not recommend this machine for the large trailers, etc. It is designed primarily for passenger car washing, but some units are claimed to wash a 35-ft tractor trailer combination in approximately 40 minutes. It is

(TURN TO PAGE 182, PLEASE)

EIS RIGHT FROM ANY ANGLE!

PACKAGED RIGHT

Large numbers and contents on attractively designed EIS sealed containers provide quick identification and simplify stock control.

MADE RIGHT

EIS products are engineered for service use, produced in our own Modern plant. Let us show you. (Ask about our CA-P kits for Chrysler products)

SERVICED RIGHT

20 EIS WAREHOUSES

Strategically located throughout the U.S. are ready to service your distributor promptly for efficient service to you.

PRICED RIGHT = SALES+PROFITS

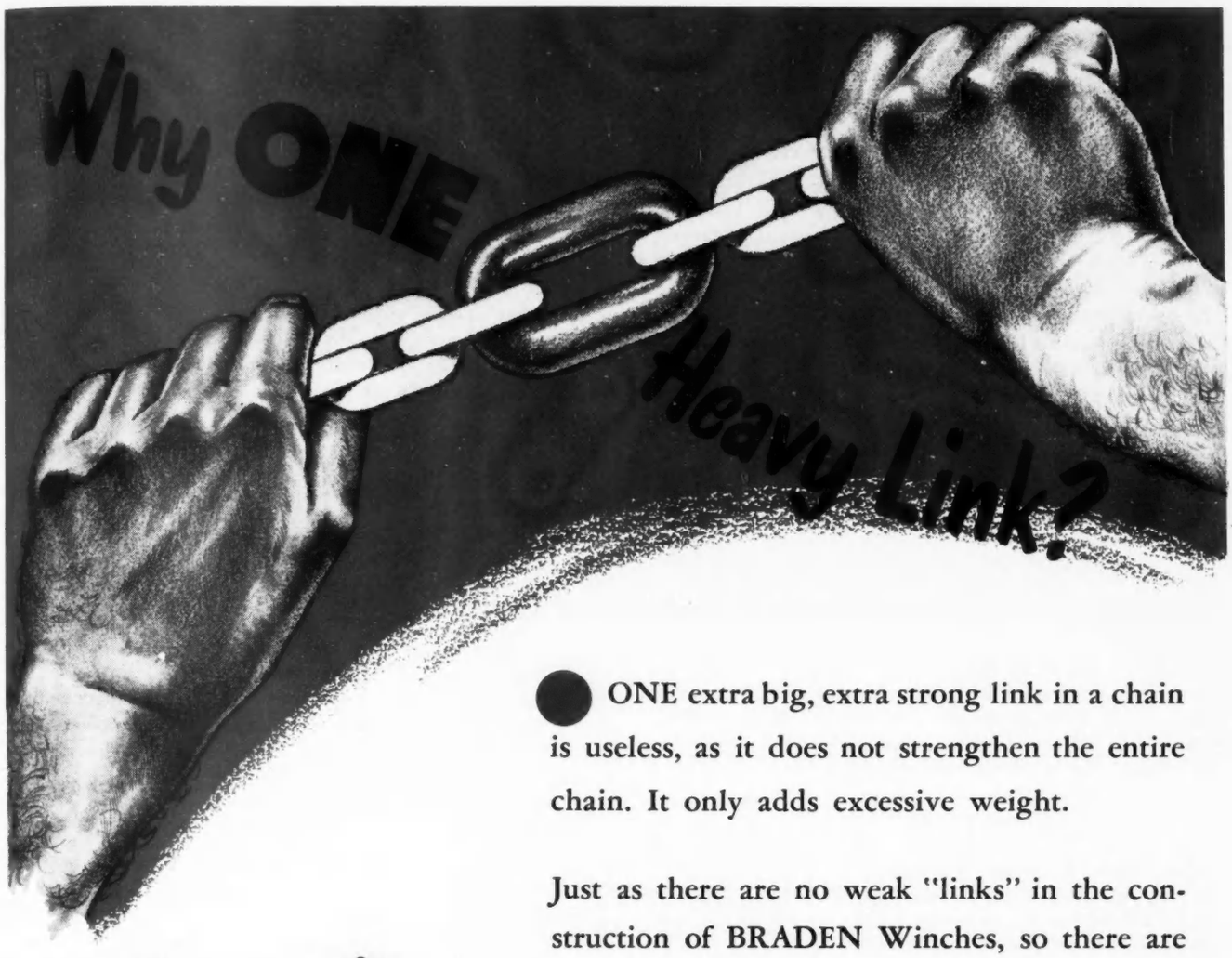
There's sales magic in the EIS *RIGHT* combination of quality and price . . . it assures you a good job and protects your profits, so vitally important today when operating costs are high.

GET IT FROM YOUR JOBBER

ASK YOUR JOBBER OR WRITE US DIRECT FOR THE NAME OF YOUR NEAREST JOBBER IN THE EVENT YOUR REGULAR SUPPLIER DOES NOT CARRY EIS PRODUCTS.

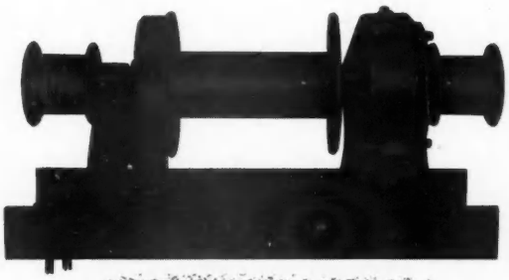
•CABLES •FLUIDS •PARTS EIS •KITS •TOOLS •CYLINDERS The BRAKE PARTS Line

EIS AUTOMOTIVE CORP. Middletown, Conn.



● ONE extra big, extra strong link in a chain is useless, as it does not strengthen the entire chain. It only adds excessive weight.

Just as there are no weak "links" in the construction of BRADEN Winches, so there are no big, bulky "links" to add useless weight. Every BRADEN part is designed to do a specific job in relation to all other parts. No part is larger or heavier than is necessary to do the job for which it was designed.



MODEL M30-20B
Safe working load: 60,000 lbs. Equipped with the OIL-COOLED, FULLY ADJUSTABLE, AUTOMATIC SAFETY BRAKE

Balanced Design = More Truck Pay Load

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BRADEN Winches

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Oklahoma

BWA-14

Wash-Up Equipment

Continued from Page 180

recognized, of course, that the speed of the operator, the condition of the vehicle and many other factors will influence this time.

Chief advantage of the power washer of this type is that it enables the operator to reach the undercarriage, and, of course, this is an important phase of washing. Thus the pressure washer will do a job that is nearly impossible with automatic types, and even fountain brushes. The high pressure available with this machine makes it ideal for removing caked mud and grease.

Chemicals can be used with this unit to improve the washing job, while steam is resorted to when necessary. Another use for the machine is in rinsing after application of emulsion precleaners, degreasing solutions, paint strippers and other cleaning materials. It is also adaptable to cleaning grease stalls, spray booths and other shop areas, taking the place of the steam cleaner in many applications. It should be recognized, however, that this pressure system is in general recommended as a supplementary equipment for most operations. When used with a fountain brush, cleaning is said to be expedited and the work accomplished satisfactorily from the standpoint of time and labor and cleaning materials.

Manufacturers of this type machine include: Champion Pneumatic Machinery Co.; Curtis Pneumatic Machinery Div. of Curtis Mfg. Co.; Turco Products, Inc.; John Bean Div., of Food Machinery and Chemical Corp.

Fountain Brushes

THE fountain brush, of course, is an old standby and can be recommended for any washing operation. In fact most fleets will have one or more handy for reaching inaccessible spots even when power washers are installed. Most of the brushes on the market boast of individual advantages, but all are built to light weight, with provision for running water through the brush heads, with bristles designed to stand up under rough usage.

Aluminum or light weight metal is generally used for the heads; in some cases a soap solution may be applied through a compartment built into the head, agitation and mixture being supplied by the water pressure. A good brush head should stand up under constant wetting and drying action.

A fibre bristle is usually recommended if an acid is to be used in in the cleaning, while horse hair is satisfactory for general cleaning. For the ultimate in economy nylon heads are provided. Whether the brush head is circular or oblong or flat depends upon the personal desires of the operator.

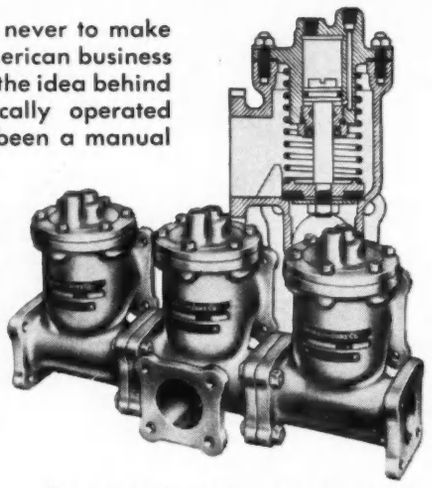
Manufacturers of fountain brushes include the following: Master Specialty Co., Inc.; Laitner Brush Co.; Milwaukee Dustless Brush Co., K. C. Fountain Brush Co. and others. The products illustrated on these pages are only a few of the many types available, while these makers represent only part of the industry.

END

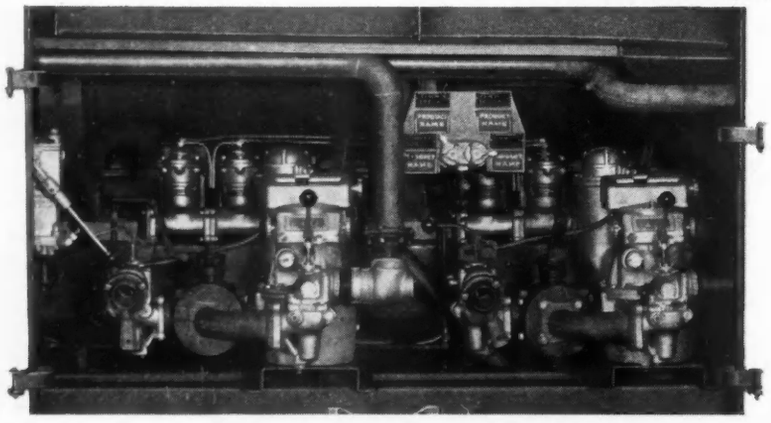
Please resume your reading on P. 65

NEW S&J HYDRAFOLD
Increases Unloading Efficiency

IT'S AN OLD SPANISH CUSTOM — never to make two motions when one will do. In American business thinking, that spells efficiency. That's the idea behind the HYDRAFOLD, a new hydraulically operated manifold. Manifolding has always been a manual operation, and often a very confusing one. Opening compartment discharge valves has been done far more efficiently. S. & J. now brings petroleum transporters a new standard of efficiency—the same hydraulic pressure which opens the internal safety valves, simultaneously opens the hydraulic manifold. All the operator does is to set the pointer of the 4-Way S. & J. Distributor to the name of the product to be dumped, stroke the handle of the hydraulic pump—both valves open simultaneously.



Shown below is an efficiently arranged discharge compartment. Note the 4-Way Distributor in the upper right center, and the hydraulic operator at the extreme left, which actuates both internal safety valves and Hydrafolds.



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Can you name any other important automotive unit that has enjoyed the overwhelming preference accorded to the AC Fuel Pump?

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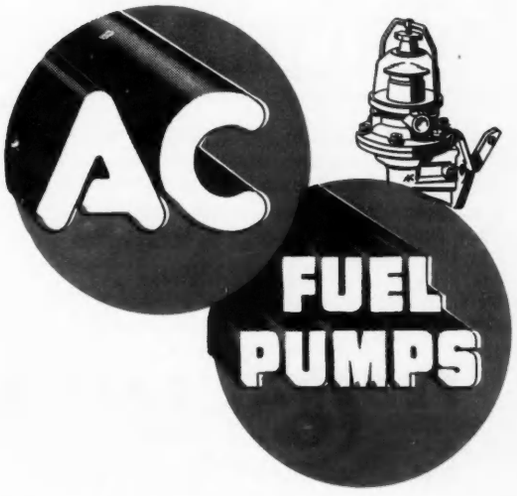
During those 23 years, AC quality has been constantly improved. With regular cleaning—and replacement when parts become worn—the AC Fuel Pump gives you the utmost in reliability. Nearly all cars, trucks and buses are equipped with AC's —*and over 40,000,000 are in daily use.*



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Truck-Trailer Manufacturers Review Size—Weight Standards

By Randall R. Howard
Special CCJ Correspondent

HOW TO GET more uniform size-and-weight standards for the thousands of truck-trailer outfits on our national highways, and also how to improve these highways, was the chief problem considered at the Second Annual Summer Meeting of the Truck-Trailer Manufacturers Assn. held in Chicago on July 14-15 at Edgewater Beach Hotel, Chicago.

E. J. Lucas was moderator for the lively "Truck Size-and-Weight Panel," the feature event. First of three aspects presented was "The Truck Design Engineer Looks at Sizes and Weights," a paper prepared by Merrill C. Horine of the Mach Manufacturing Corp. engineering staff. Illness prevented his attendance and it was read by A. F. Fenner. Horine charged that most states have one engineering capacity standard for highways and another for bridges. He told of many personally observed pavement failures from crumbling cement; and from breaking of concrete slabs because on poor foundation; and, in contrast, many pavements standing up for years under heavy usage. He thus reasoned that chief highway failures are not chargeable to trucks, but either to slack engineering specifications, or lack of contractors adherence, or poor or dishonest acceptance inspection.

He advocated more strict national adherence to classified highways, such as "A," routes with axle weights up to 20,000 pounds; "B," routes to 18,000 pounds; and "C," routes to 16,000. Thus, he argued, the truck industry "would be free to design vehicles adapted to render the most efficient and economical service."

Hal H. Hale, executive secretary, American Assn. of State Highway Officials, followed with a talk on "The Highway Engineer Looks at Sizes and Weights." In general, he complimented the present-day state highway engineering staffs, stating that they all were following and enforcing essentially the same engineering construction and maintenance standards for heavy-traffic state highways. He chiefly criticized lack of adequate standards in use of state funds for city and county road construction. "The average city and county," he asserted, "has never had a long-range highway construction or financing system."

He pointed out that the present policy of division of roads into primary and secondary and local, does not always work out. As an example, he cited the need for the rural milk pick-up truck to use all types of roads; likewise, the farm-to-market livestock trucks.

He stated the opinion that, in general, the states do not want the Federal government to police their highways—which must follow if there should be established national highway size-and-weight standards. He listed as probably the present most controversial national highway question, the proposal

(TURN TO PAGE 186, PLEASE)

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SEALED FOR LIFE—Packed with Federal specified grease, a combination of steel shields and felt seals insure lifetime lubrication and service.

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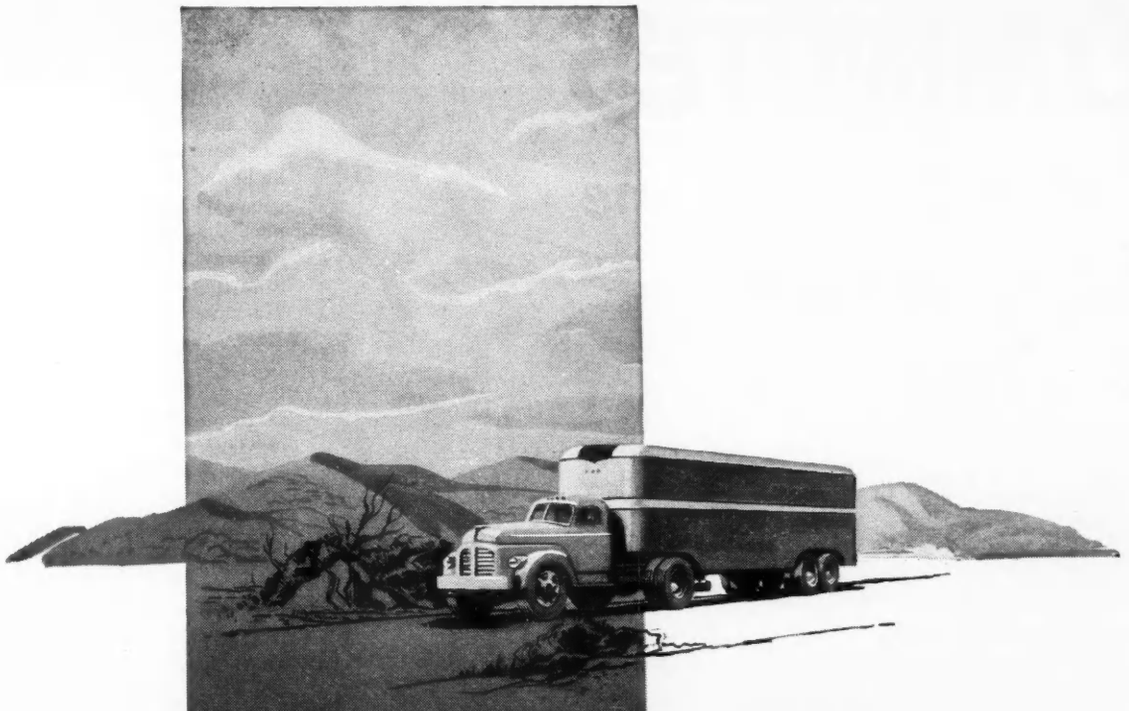

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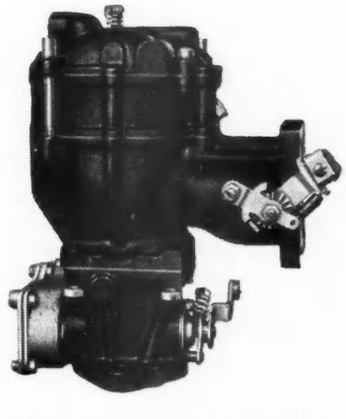

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Truck-Trailer Manufacturers

Continued from Page 184

that an 18,000-pound axle-weight limitation be standardized for all states. And he stated the opinion that our present greatest need is "more national wisdom" in knowing exactly what is good highway construction. As outstanding toward this end, he mentioned the Maryland Road Tests now underway. (See page 54, CCJ, July, 1950—Ed.) His own association is advocating that this start in road testing be carried on through two additional related tests.

Alex. K. Scherer, President of Scherer Freight Lines, which is the operator, in Illinois, of a fleet of 300 trucks and trailers, spoke out frankly on "The Truck Operator Looks at Sizes and Weights." His first comments were directed to the management of truck-trailer and truck manufacturers. He said some of them occasionally have been "too liberal" in purchasing terms made to truck operators, coupled with the charge that many of their salesmen need more engineering schooling to help and guide operators in the purchase of equipment adapted to their exact engineering needs.

On the other hand, he complimented the manufacturers on some of their newer equipment designs which provide greater safety and comfort to the driver, but, he said, they should give more attention to help train mechanics needed for proper maintenance of their equipment.

As to overloading, Scherer said organized truckers want to do all they can toward its prevention. Conscious overloading, he asserted, is being carried on only by a few "rate chiselers." However, he said that some state officials have not been cooperative in permitting the trucking industry to help more in the control of this practice. Most often, he said, when a single wheel is found overloaded, this has been due to load shifting. He thinks that state regulations should permit wheel load tolerance up to 3 or 5 per cent.

However, he believes that most truckers, even though yet unable to work agreeably with their own state authorities, or even to agree among themselves as to size and weight limitations, still want such regulations to remain within the jurisdiction of the states, rather than the Federal government. But, Scherer agreed, that all parties concerned with the national problem of truck size-and-weight regulation, do need the type of guidance in highway engineering promised through the Maryland Road Test,

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THE COMPLETE ENGINE FEDERAL Mogul BEARING SERVICE

As yet there is no universal engine bearing. It's a major engineering, manufacturing and distributing accomplishment to keep all the alloys, numbers, sizes and undersizes needed quickly and economically available to every service shop in the nation. We are on top of that job constantly—to be sure that the red and black Federal-Mogul box is your best guide to the most practical bearing application for every needed service job.

We make all types of sleeve bearings in our 7 manufacturing plants, so we can deliver what's needed—instead of pushing what we might prefer to sell.

GET IT FROM YOUR JOBBER

FEDERAL-MOGUL SERVICE

(Division of Federal-Mogul Corporation)

DETROIT 13, MICHIGAN

New Product Descriptions

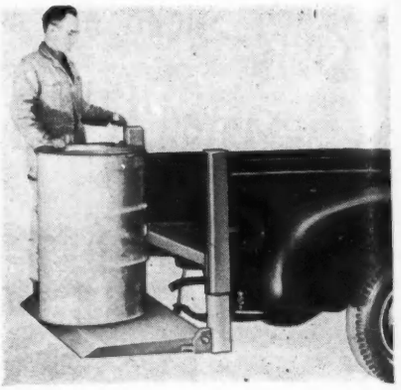
Continued from Page 76

sures of from 30 to 100 lb. It is 43-in. high, 44-in. long and 24-in. deep. All working parts are accessible in one demountable unit. A precision built pressure regulator provides automatic fire control. The solution pump has no gears to wear out, never needs oiling or maintenance. An accumulator equalizes pressure and produces an even flow of cleaning fluid through the coils. Chem-Therm Mfg. Co., Pasadena, Calif.

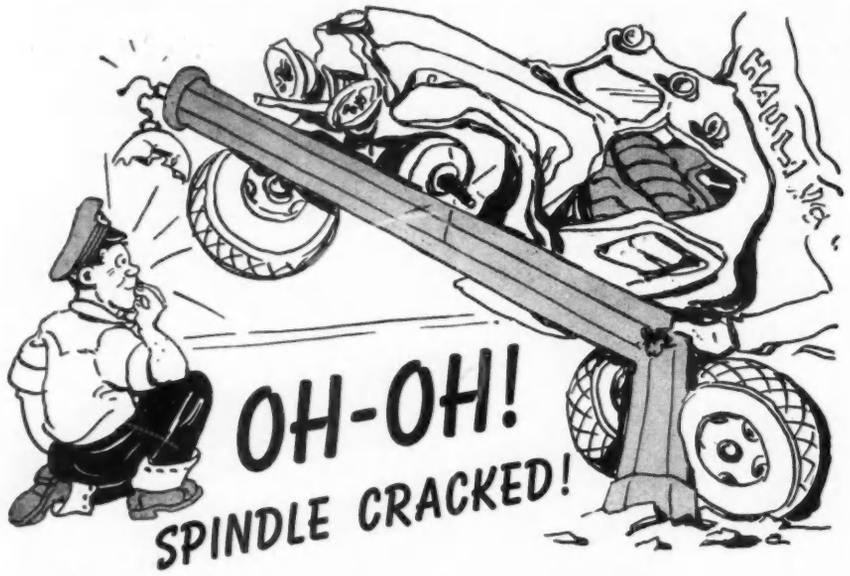
P259. Hydraulic Tailgate

A hydraulically powered tailgate loader for pickup trucks, called the Lift-O-Matic, has a lifting capacity of 1000 pounds. Hydraulic power is provided by a fan-belt driven hydraulic pump with self-contained clutch. One handy control is used for all operations.

The unit is all steel constructed. When not in use it can be level-locked at the truck body floor level, or it can be swung up and securely locked, acting as a regular tailgate. A safety by-pass



valve in the hydraulic pump prevents overloading and endangering the hydraulic system. National Lift Co., Waukesha, Wis.



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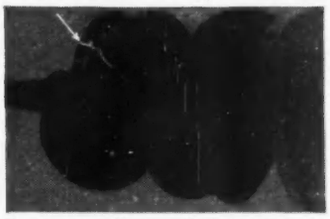
Could Have Found the Crack During Overhaul

Needless failure of parts in service is dangerous, EXPENSIVE! It disrupts scheduled operations and promised deliveries. Accidents can be avoided by using safe, sure, MAGNAFLUX-MAGNAGLO inspection during overhaul.

Only the biggest defects in crankshafts, blocks, spindles, axles and other vital parts can be discovered by ordinary examination. But all cracks and defects not yet visible can be spotted instantly by inspection with MAGNAFLUX-MAGNAGLO. Faulty parts need never be returned to service if you use Magnaflux-Magnaglo. Find out now how this safe, sure service can help protect you. It is available now at the best automotive overhaul shops—to serve you.



Fluorescent Magnaglo indication, as discovered on crank throw. Glowing line marks non-visible crack very near to final failure.

Magnaglo inspection of this steering spindle gives clear indication of otherwise invisible serious cracks that could cause failure.

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New York • Cleveland • Detroit • Dallas • Los Angeles
Export Distributor: Curtis Wright Corp. In Canada: Williams & Wilson, Ltd.

Late Flashes

The new improved all-aluminum alloy Kurb-Side, delivery van body, is now being offered by the **J. B. E. Olson Corp.**, Brooklyn, N. Y.

Champ-Items, Inc., St. Louis, Mo., has introduced their No. 600 Stud Assortment for manifold, transmission, and motor repairs.

The **Cole-Hersee Co.**, Boston, Mass., has just announced that their famous heavy duty lock type connector is now available in a four point unit.

A new spark plug cleaner, known as "Model K," has recently been introduced by the **AC Spark Plug Div. of General Motors.** Featured are quicker, thorough cleaning, dust tight filter bag and long-life replaceable rubber nozzle tip.

Addition of several new Proto puller items, including a bearing separator-puller plate, fourteen step plate adapters, two jaw and two screw tips, has been announced by the **Plomb Tool Co.**, Los Angeles, Calif.

The new Eagle Claw wall rack for use in auto and truck body and fender repair departments in shops, garages and service stations, is now offered by **Lorain Industries, Inc.**, Lorain. Ohio.

A new plastic seat covering material especially designed for the transportation industry was announced by **Samuel Moore & Co.**, Mantua, Ohio.

P260. Glass Crane

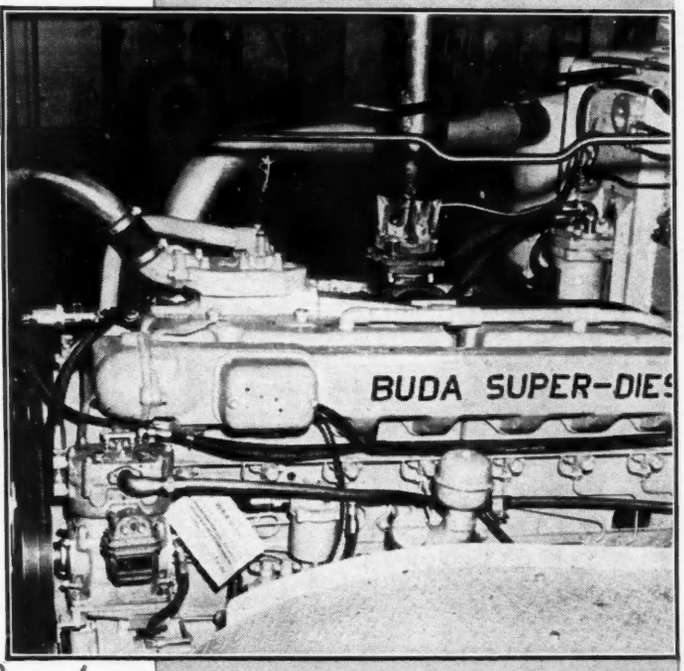
The glass crane, for unloading case lots of glass weighing tons, mounts on any standard truck chassis. The unit

(TURN TO PAGE 190, PLEASE)

FLEXIBLE HOSE LINES

WITH DETACHABLE, REUSABLE FITTINGS

Always first
ON HEAVY MOBILE EQUIPMENT



Save time, save money and reduce inventory by putting the "Aeroquip Idea" to work for you. With Aeroquip you make your own flexible hose assemblies by cutting bulk hose to desired lengths and attaching Aeroquip Reusable Fittings. Assembly can be accomplished quickly and easily right on the job. No special tools are required. No training is needed. Aeroquip high quality Flexible Hose Lines improve performance and reduce maintenance. They eliminate leaks due to vibration and operate dependably at extremely high or low temperatures. They are widely used for hydraulic fluid, water, air, lubricating oils, gas and Diesel fuels and many other fluids.

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B.D. Check into this money saving idea—Joe

This engine is plumbed with Aeroquip Flexible Hose Assemblies. The detachable, reusable fittings make it possible to service mobile equipment quickly on the road or in the shop. A small inventory of Aeroquip Hose and Fittings reduces downtime and helps maintain schedules.

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AEROQUIP PRODUCTS ARE FULLY PROTECTED BY PATENTS IN U. S. A. AND ABROAD

New Product Descriptions

Continued from Page 188

consists of a telescoping center post with a carrier track attached to the top, a multiple drum winch and clutch unit, and a power take-off geared to fit the type truck on which it is mounted. Blackman Mfg. Co., Los Nietos, Calif.

P261. Trailing Axles

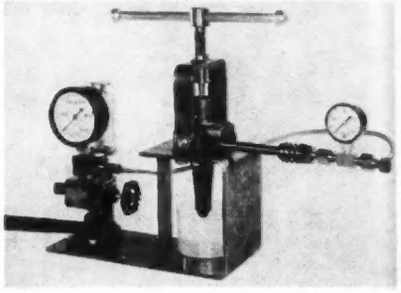
New improvements in the Little Giant trailing axle line include heavier parts recommended to provide high safety factor and complete rubber bushings, eliminate four grease points.

Effective in models B and C with load capacities of 12,000 and 15,000 lb, with installation of these third axles, axle spacing may be either 44 or 49 inches. Little Giant Products, Peoria, Ill.

P262. Nozzle Test Fixture

A fixture for use with the Bacharach nozzle tester provides a completely self-contained testing device for injectors used in Cummins engine Models A, H, HS, NH, NHS, NVH, and NVHS.

It consists of a stand, clamping apparatus, gage and fittings. This unit is suited for testing injector check valve for leakage, checking injector for leakage past plunger, testing injector spray



pattern and for leakage at injector spray holes, and checking opening pressure of injector check valve and inlet connection check valve. Bacharach Industrial Equipment Co., Pittsburgh, Pa.

P263. Manometer

The Lo-Vac manometer, straight, low-reading, is calibrated in tenths of an in. of mercury. Said to be ideal for checking and adjusting full vacuum controlled ignition distributors as used, the unit can readily be adapted to modern distributor test fixtures. Price Instrument Engineering Co., Inc., Newport News, Va.

P264. HD Battery

Called the Willard Heavy Duty De-Luxe, the new battery is said to withstand higher temperatures and provide more cranking power. A new sealing compound and re-designed container are incorporated. The new hard rubber container is reinforced at points of stress. Advance plate design is said to account

for 25 per cent more cranking ability than conventional 100 amp-hour batteries. Williard Storage Battery Co., Cleveland, Ohio.

END

Please resume your reading on P. 78

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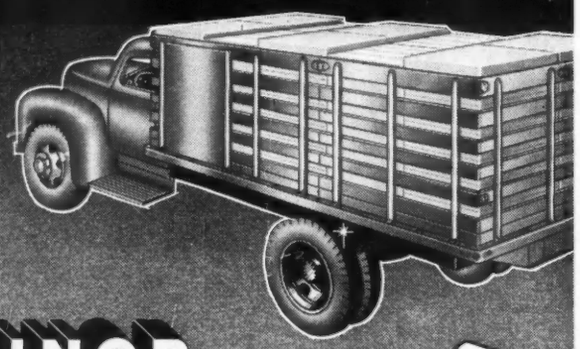
INCREASED *payloads* INCREASED *profits*



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If you are faced with costly truck breakdowns due to overloading, the easy and economical answer to your problem is Trainor Helper Springs and Build-Up Kits. Increase your fleet's load carrying capacity and your profits safely and protect your trucks from unnecessary abuse with Trainor Helper Springs. Individually "load tested," they are engineered to give even higher than specified load carrying capacity. Trainor Helper Springs and Build-Up Kits are designed for simple installation. All attaching parts are made of spring steel without breakable castings.

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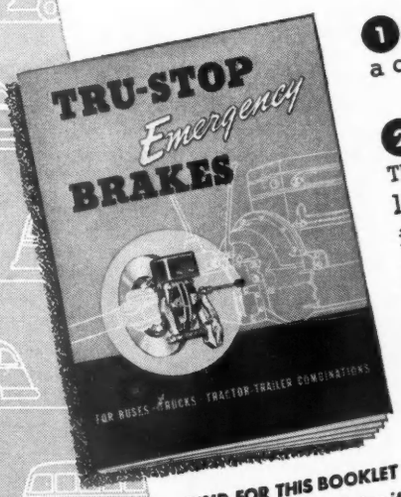
TRU-STOP *Emergency* BRAKES

HERE'S SAFETY THAT PAYS OFF TWICE

SAFETY ALWAYS PAYS OFF

But here's a safety measure that pays off in over-all economy as well as a good accident record.

Consider these facts about TRU-STOP Emergency Brakes:



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1. Operating on the propeller shaft, they constitute a complete and independent braking system.

2. In addition to being good parking brakes, TRU-STOPS are engineered to decelerate and stop the loaded vehicle—repeatedly—without damage to linings. They are real emergency brakes—able to pinch hit for service brakes if necessary.

3. TRU-STOPS rarely need service. When they need adjusting or relining, the job is a simple one for any mechanic with ordinary tools. Saving in maintenance is many times the slight additional cost of TRU-STOPS.

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AMERICAN CHAIN & CABLE

TRADE MARK

In Business for Your Safety

TRU-STOP *Emergency* BRAKES

CCJ News Reports

Continued from Page 27

Diesel to Seek Speed Records

The green Cummins Diesel Special, No. 61, which set new diesel speed marks in the 1950 Indianapolis Speedway qualifications and race, will try for six international speed records for diesel-powered cars, officials of Cummins Engine Co., Inc., Columbus, Ind., announced recently. Straightaway runs on the Bonneville Salt Flats, 100 miles west of Salt Lake City, are scheduled in the immediate future.

Jimmy Jackson, veteran driver in the Indianapolis 500-mile race, who drove the diesel in the Speedway competition last Memorial Day, will pilot the car in the Salt Flat run.

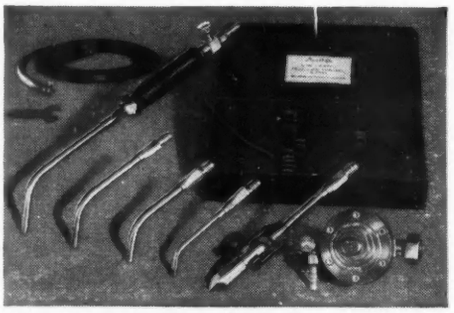
D. J. "Don" Cummins, vice president-engineering for Cummins, said "no change has been made in the car other than to add a hood over the driver's seat, thereby completing the streamlining. The engine is the same."

1950 Motor Truck Factory Sales by G.V.W.*

	5,000 lb. and less	5,001–10,000	10,001–14,000	14,001–16,000	16,000–19,500	19,500–26,000	Over 26,000	Total
January	39,252	19,251	6,804	13,093	2,680	1,816	1,482	84,378
February	39,629	17,151	6,032	11,739	2,720	2,157	1,511	80,939
March	47,828	20,921	7,200	14,644	3,680	3,474	2,062	99,809
April	46,375	19,025	5,884	12,971	3,391	3,322	2,326	93,294
May	52,805	21,935	7,438	16,721	4,077	3,598	2,393	108,997
Total—5 Mos. 1950	225,889	98,283	33,388	69,168	16,548	14,367	9,774	467,417
Total—5 Mos. 1949	178,859	124,321	37,335	77,414	13,486	9,118	6,540	447,073

* Automobile Manufacturers Association.

Soldering Doesn't Cost Me A Cent



"Prest-O-Lite" 5-in-1 Outfit $22.50

Since I Changed to This Outfit

Here's the way I figure it. I used to pump, prime, and generate before I could start work. Now I just turn a valve and flick a lighter. I get full heat instantly and save 5 to 10 minutes every time I light up. That's worth money . . . enough to work my new "Prest-O-Lite" Outfit for 54 minutes on an average job! By the end of a day, time saved this way has paid for all the "Prest-O-Lite" Acetylene I've burned.

What's more, my 5-in-1 Outfit handles easily and always gives me the exact flame and heat I want. So jobs go faster, too. I figure this extra time saved pays for my solder and flux. This way, soldering doesn't cost me a cent!

Ask your Jobber or write for more details. The Linde Air Products Company, 30 East 42nd Street, New York 17, N. Y. In Canada: Dominion Oxygen Company, Limited, Toronto.

"Prest-O-Lite" is a registered trade-mark of a Unit of Union Carbide and Carbon Corporation.

Order from your local Jobber

Branch Motor Express to Advertise

Mayer Burnofsky, president, Branch Motor Express Co., announced recently that his organization is embarking on an extensive, long-range advertising and public relations campaign. Branch was founded in 1910, serving Allentown and Reading, Pa. Now it operates overnight service between New York, Newark, Philadelphia, Reading, Allentown, Baltimore and Washington.

It is said that Branch has the lowest claim record (less than ¼ per cent) and that this will be a strong point in Branch's advertising program. Other factors to be stressed probably will include modern equipment, on-time delivery record, safety patrols, safety standards and low "down-time" rate.

U. S. Army Orders Jeeps

United States Ordnance Department placed an order with Willys-Overland Motors for 8,350 Jeeps, the aggregate cost of which will be $22,291,330.40.

The order, largest placed with Willys-

(TURN TO PAGE 194, PLEASE)

Truck Trailer Shipments, 1949-48*

	1949	1948
Vans:		
Insulated and refrigerated	2,756	2,724
All other closed top	14,623	18,968
Open top	1,620	2,023
Total—Vans	18,999	23,715
Platform:		
With cattle and stake racks	1,094	1,949
With grain bodies	502	895
All other	4,873	6,366
Total—Platforms	6,469	9,210
Tanks:		
Petroleum	2,008	3,042
All other	166	378
Total—Tanks	2,174	3,420
Pole and Logging:		
Single axle	681	2,184
Tandem axle	628	1,718
Total	1,309	3,902
Low-bed heavy haulers	1,433	1,834
Dump trailers	522	654
All other trailers	1,841	2,142
Total—Complete Trailers	32,747	44,877
Trailer chassis	1,526	2,083
Total—Trailers and Chassis	34,273	46,960

* Industry Division, Bureau of the Census.

IF *you* WERE IN THE DRIVER'S SEAT...

YOU'D BUY THE SAFETY OF AMERICAN BOSCH DUAL ELECTRIC WIPERS

- ***Direct*, electric drive with constant action regardless of engine load or speed.**
- **Synchronized operation of Dual arms and blades.**
- **Two speed operation. Tandem or opposed wiping motion.**
- **Fully automatic blade parking adjustable to suit installation.**
- **Bad weather power — 30 inch/lbs. torque per blade.**
- **Thermal cutout protects wiper motor against overload.**
- **Arms up to 12" long. Blades up to 14". Wiping angle up to 118°.**
- **Available for 6 or 12 volt systems.**

No stalling, no stuttering of the wiper blades to cloud safe vision of the road ahead. Independent of engine vacuum and regardless of speed or load, these powerful, *direct* electric drive Dual Wipers *always* operate at constant, synchronized speed. Rugged, heavy duty construction assures years of trouble-free operation. Ask about Model WWB designed for easy, swift installation under cowl. For vehicles requiring Single Windshield Wipers with header mounting, Model WWA is available. Write today for complete specifications and application data for all the units in your Fleet.

AMERICAN BOSCH

American Bosch

MAGNETOS • GENERATORS • VOLTAGE REGULATORS • IGNITION COILS
ELECTRIC WINDSHIELD WIPERS • DIESEL FUEL INJECTION EQUIPMENT
AMERICAN BOSCH CORPORATION • SPRINGFIELD 7 • MASS.

CCJ News Reports

Continued from Page 192

Overland in the last five years, and one of the largest placed with any single automotive company since the war, nearly doubles that of June 4, 1949, when Willys-Overland was instructed to supply more than 4000 Jeeps and parts for Army purposes at a cost of $12,139,500.

Tire Production Hits High

Production of passenger tires reached a new all-time monthly high of 7,369,190 units during May, 1950, according to the figures released today by The Rubber Manufacturers Assn. The previous monthly production record was 7,365,790 units established during October, 1947.

Truck and bus tire production increased 13.05 per cent during May to 1,259,897 units, as compared with the previous month's 1,114,443 units. Shipments of 1,244.281 units were 10.17 per cent above April's 1,129,389 units. Inventory was up to 2,002,692 units against April's 1,986,705 units.

Editors Pick Bonney Contest Winners

CCJ Editor Bart Rawson points to a winner among 13,000 entries in the Bonney Tool Essay contest. Left to right are: Paul Dumas of Implement and Tractor; E. S. Sensenderfer, Bonney ad manager; Rawson; Bill Toboldt of Motor Service and Ted Quinn of Commercial Refrigeration and Air Conditioning

CLEANING *SHORTCUTS**...

Hall Scott Pancake Engine before desludging

Same engine after desludging with Magnus 755

DESLUDGING WITHOUT DISMANTLING

Desludging truck and bus engines with Magnus 755 can many times save you the cost of an overhaul job. Rings are freed, oil return holes cleared, oil lines and screens cleaned and sludge removed in one hour, resulting in restored power and increased gas and oil mileage.

***Desludging without dismantling is only one of the many cleaning shortcuts described in detail in the Magnus Truck and Bus Cleaning Handbook (see pages 10 to 13). Write for a copy now.**

MAGNUS CHEMICAL CO. • 38 South Ave., Garwood, N. J.
In Canada — Magnus Chemicals, Ltd., Montreal.
Service representatives in principal cities.

Magnus
CLEANERS • EQUIPMENT • METHODS

Motor Freight Up 11.1 Per Cent

The volume of freight transported by motor carriers in May, 1950, increased 11.1 per cent over April, 1950, and 31 per cent over May, 1949.

Reports received by ATA from 302 carriers in 41 states showed these carriers transported an aggregate of 3,929,766 tons in May, as against 3,537,476 tons in April and 2,999,558 tons in May, 1949.

Approximately 79 per cent of all tonnage transported in the month was hauled by carriers of general freight. The volume in this category increased 11.5 per cent over April and 34.2 per cent over May, 1949.

LP Bus for Chicago

ACF-Brill Motors Co., Philadelphia, has furnished Chicago Transit Authority a 44-passenger city bus demonstrator which utilizes propane, or liquefied petroleum gas as a motor fuel. The Authority is operating the coach in regular passenger service.

GM to Fete NSC Contest Winners

General Motors again will salute winners of the National Fleet Safety Contest with a Victory Award luncheon, which will climax the three-day program of the commercial vehicle section of the National Safety Congress at the LaSalle Hotel, Chicago, Oct. 17-19.

NJMTA Safety Patrol

The New Jersey Motor Truck Assn. now has joined ranks with other state associations in establishing a highway safety patrol to supplement the work of regular law enforcement officials.

The first patrol car in the program is

(TURN TO PAGE 196, PLEASE)

Bendix Products Division

CREATIVE ENGINEERING

GEARED TO QUANTITY PRODUCTION

MORE AND MORE THE TREND IS TO

HYDROVAC

THE WORLD'S BEST PROVEN POWER BRAKE

When fleet operators all over the nation express an emphatic preference for a particular product, you may be sure this preference is based on operating efficiency and economy.

In the field of power braking, for example, the unrivalled popularity of Hydrovac* is the direct result of unmatched performance at the lowest possible cost.

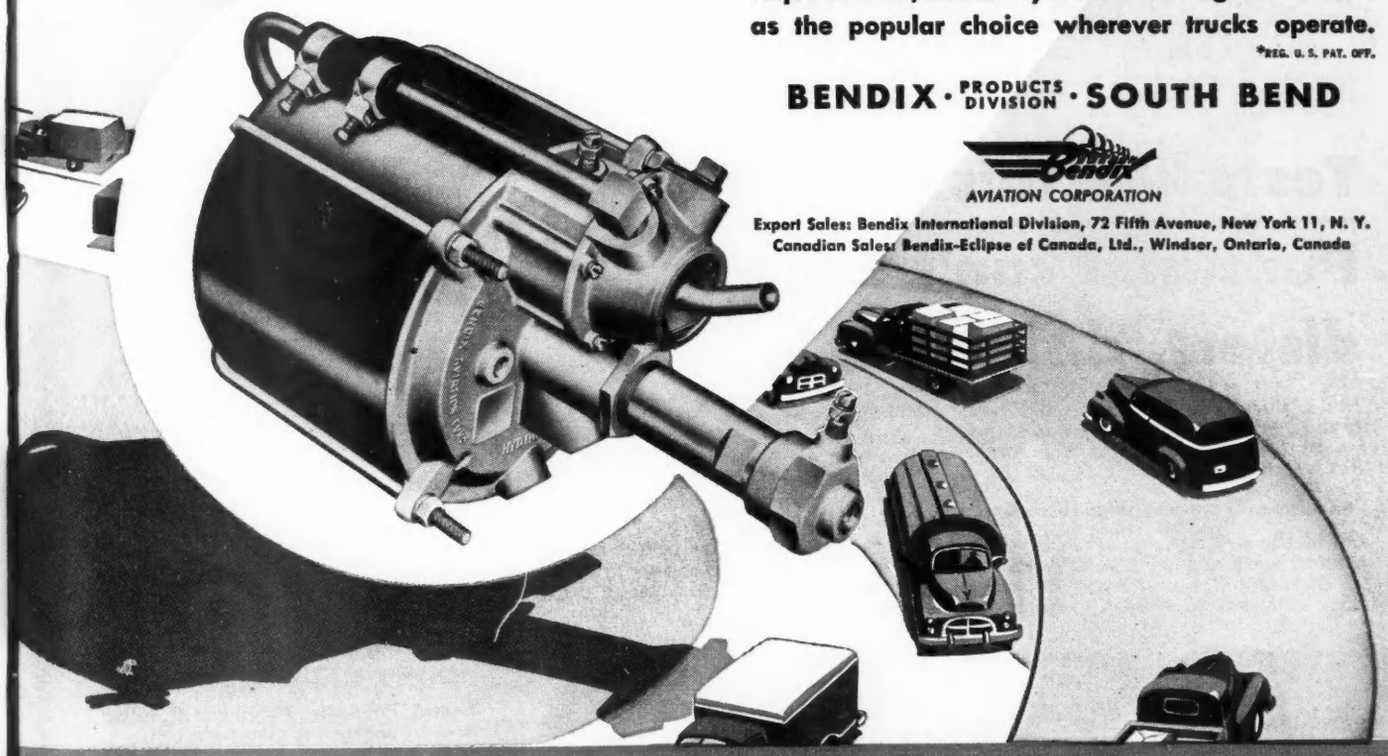
Outstanding design, manufacturing excellence, and a complete line of power braking units, engineered and priced to meet the fleet owners' requirements, make Hydrovac the logical as well as the popular choice wherever trucks operate.

*REG. U. S. PAT. OFF.

BENDIX · PRODUCTS DIVISION · SOUTH BEND

Bendix AVIATION CORPORATION

Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N. Y.
Canadian Sales: Bendix-Eclipse of Canada, Ltd., Windsor, Ontario, Canada

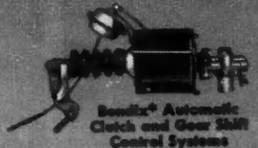


Centermount Emergency and Parking Brake

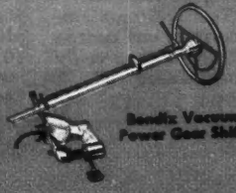
B-K* Power Braking System for Cargo Trailers

Bendix Hydraulic Power Steering

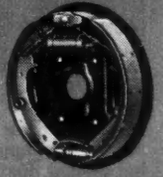
BUILDERS OF THE BASICS OF BETTER MOTOR VEHICLES



Bendix* Automatic Clutch and Gear Shift Control Systems



Bendix Vacuum-Power Gear Shifter



Bendix* Brakes for Buses, Trucks, and Passenger Cars

CCJ News Reports

Continued from Page 194

on the highways, operated by the A. W. Biddulph Agency of Elizabeth. Additional cars for the establishment of a 24-hour patrol of the entire state are planned for the near future.

12th Annual Course for Fleetmen

Approximately 50 men who supervise fleets of buses, taxis, and trucks are expected to attend Pennsylvania State College's 12th annual Motor Fleet Supervisor's Course at State College, Pa., September 11-15.

Methods of reducing accidents, cutting costs, and increasing profits will be stressed in addition to building better public relations. Supervisors will learn how to pick good drivers, how to train them, how to supervise them, and how to maintain interest.

New 152 Hp Buda Diesel

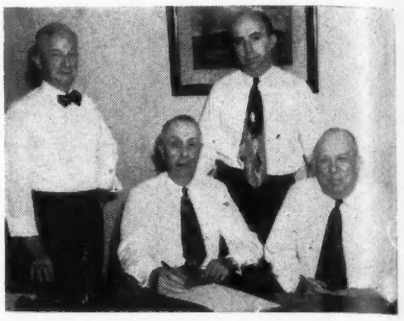
Following a recent announcement of three new diesels (See CCJ, July, Page 74) the Buda Co. of Harvey, Ill., has developed an additional new heavy-duty diesel. Suitable for operation in all kinds of trucks, buses and tractors, carrying gross loads up to 52,000 lb, Model 6-DTS-468 is a supercharged engine developing 152 hp, and a maximum torque of 370 lb-ft at 1600 rpm. It has a bore of 4¼ in., a stroke of 5½ in., and piston displacement of 468.3 cu in. It is a 6-cyl model, full diesel, solid injection type.

The overall length of the unit from the flywheel housing to the front of the fan is 47 9/16 in.; the width at the widest point is 29½ in. The unit weighs, without electrical equipment and air compressor, 1418 lb.

Walker Acquires DeLuxe Products

On July 1, 1950, Walker Mfg. Co. of Wisconsin, manufacturer of automotive jacks, lifts, exhaust systems and oil filters, acquired DeLuxe Products Corp., La Porte, Ind., manufacturer of a patented, specialized line of oil filters and cartridges.

The DeLuxe operation will be maintained as a separate division at La Porte, and will continue its present sales policy. However, certain cartridges made under the basic DeLuxe patents will be incorported into the Walker Oil Filter line, giving Walker distributors and jobbers direct access to the strong DeLuxe original equipment market.



Shown in the corporate proceedings are Walker and DeLuxe executives. Seated l. to r. James S. Allen, president of Walker Mfg. Co. and H. A. Lightner, president of DeLuxe. Standing are H. M. Cable, DeLuxe executive vice president and T. B. Earle, secretary-treasurer of Walker

Movers' Conference

At its annual meeting early in July, the Household Goods Carriers' Conference of the American Trucking Assn. voted to change its name. From now on, it will be known as the Movers' Conference of America, ATA. All officers were reelected and include J. Wallace Fager, chairman; J. L. Wilkinson, vice-chairman; Harold J. Blaine, secretary, and John F. Ivory, treasurer.

END

Please resume your reading on P. 31

Tests like this PROVE . . .

Purolator can't warp, distort, disintegrate!

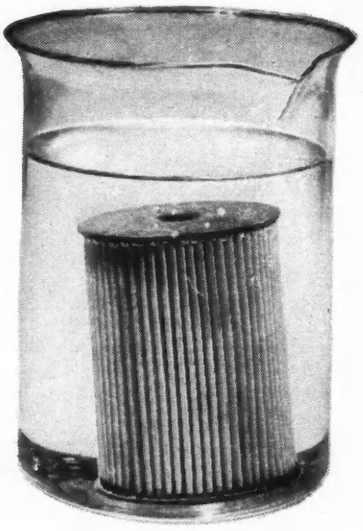
Put a Purolator* Micronic Oil Filter refill in a jar of water . . . let it stand up to 300 hours; it will not warp, distort, or disintegrate!

An extremely important demonstration.

Oil in the average crankcase is often diluted with as much as 10% water. As little as 5% causes many ordinary filter elements to swell up and practically shut off the oil flow within 3 hrs.

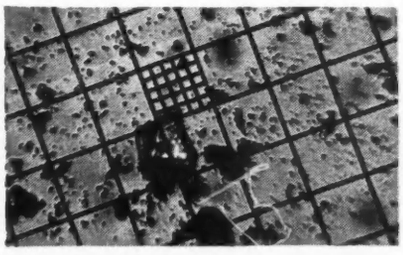
Purolator Micronic* Oil Filter assures complete filtration. It removes all the sludge, abrasives, leaves *in* important additives so many other oil filters take *out*.

Cut refill bills, downtime, engine repairs. Your supplier has a Purolator refill for practically every make vehicle or original filter.

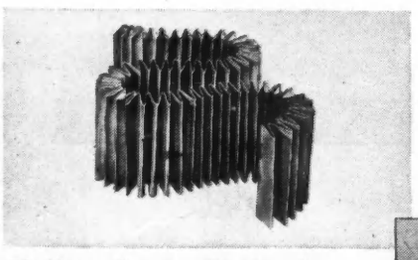


Typical Purolator Micronic Oil Filter element undergoing immersion test.

*Reg. U. S. Pat. Off.



Filters Micronic Particles. In tests on oil filters, with approved Test Dust containing graded dust ranging from one micron (.000039 inch) on up, Purolator's *specially designed Micronic element* filtered 97.8% on the first pass-through.



10 Times Greater Filtering Area. Purolator's revolutionary accordion-pleated design provides an area up to 10 times that of old-style filters. This means far greater dirt-holding capacity . . . much longer filter-life.

PUROLATOR PRODUCTS INC.
Rahway, New Jersey, and Toronto, Ontario, Canada

PUROLATOR
MICRONIC OIL FILTER
"FIRST IN THE FIELD OF FILTERING"

Here's a dependable, handy size Extinguisher that gives greatly increased fire protection at low cost! DIETZ Model No. 757 *Volunteer* Fire Extinguishers, spotted at danger zones, can save seconds that spell the difference between a small, easily controlled blaze and a destructive, runaway fire! Keep a *Volunteer* in the cab of every vehicle. Keep one or more in the van. And every repair shop needs several!* There's no such thing as too much safety!

The *Volunteer* quickly and surely smothers fires of all types . . . gasoline, oil or even electrical fires . . . its fluid is a safe non-conductor. Sturdily and carefully made of quality materials, the *Volunteer* projects its stream for 20 feet! The *Volunteer* is refillable, leakproof — and ALWAYS works! Comes with easy-mounting cadmium plated steel bracket. GET IT FROM YOUR JOBBER TODAY! R. E. Dietz Company, 60 Laight St., New York 13, N. Y.

*Note: The *Volunteer* is a pint capacity extinguisher. This size is not eligible for Underwriter's approval. The *Volunteer* is intended to supplement, not to replace, approved extinguishers where such are required by law.

Make your order include a supply of DIETZ NO. 657 VOLUNTEER REFILLS for extra safety!

NEW DIETZ PRODUCTS!

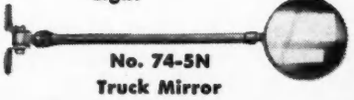
Here are samples of the soundly designed new Lights and Mirrors which make DIETZ the superior Line for ALL Automotive Lights and Safety Accessories. Consult Catalog for full details. ORDER TODAY!

No. 310 Back Up Light

No. 43-B Giant Stop Light

No. 80-C Streamlined Marker Light

No. 91 Protected Marker Light



No. 74-5N Truck Mirror

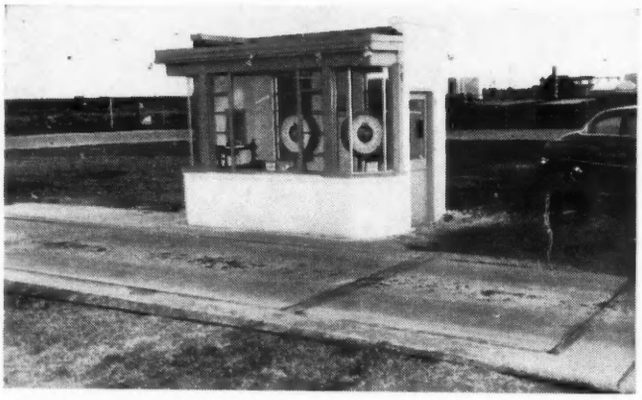
OVER A CENTURY OF *Safety* LIGHTING DIETZ

Detroit Dispatch

Continued from Page 31

Identification Troubles

There seems to be a bit of trouble brewing over placing of certified net horsepower ratings on truck identification plates. It is reported that some companies still are not including that particular data despite an industry agreement to provide it. We have a hint that at least one manufacturer now supplying the data may drop it from the plate, at least until all others comply with the agreement.



Super Scale

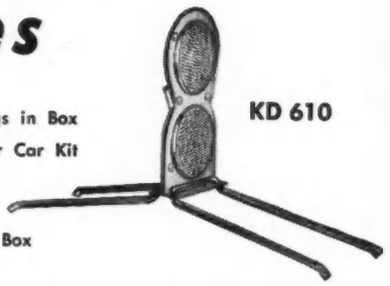
Claimed to be the world's largest combination platform and axle scale, this unit installed in the new Trailmobile branch plant in Detroit has a 100,000 lb automatic dial. The two-sectioned scale provides both gross and separate axle weights

for greater safety

THE COMPLETE LINE • SAFTEE PRODUCTS •

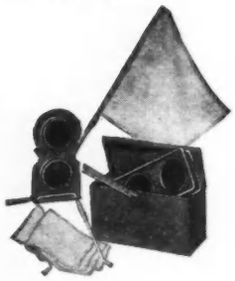
reflector flares

KD 610-2F Two Flares . . . Two Flags in Box
KD 610-2P Two Flares . . . Passenger Car Kit
KD 610-3 Three Flares in Box
KD 610-3F Three Flares . . . Three Flags in Box



KD 610

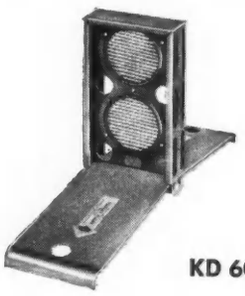
KD 610-3F



KD 610 with 3" genuine *Stimsonite* No. 12-A red plastic reflectors, is a miracle of light reflection . . . with wide range visibility *exceeding ICC and SAE requirements.* Heavy steel legs that grip pavements telescope to permit easy packing in small container. Built-in flag holders at 30° angle give greater visibility during daytime use. Packed with or without danger flags in strong metal box which may be padlocked for safe keeping. Flares and boxes finished with durable baked Danger Red enamel. *KD 610 Reflector Flares are competitively priced.*

KD 609 Heavy Duty Triflex Saftee Flare . . . of heavy gauge steel . . . constructed to hold danger flag . . . Red baked enamel for tough service . . . compact . . . folds like a camera when not in use . . . bracket for handy mounting on vehicle . . . positive protection during emergencies.

● K-D manufactures a *Complete Line* of electric, reflector and kerosene flares, danger flags and other safety products.



KD 609

K-D LAMP COMPANY

A PRODUCT OF NOMA ELECTRIC CORPORATION

1910 ELM STREET CINCINNATI 10, OHIO

Trailmobile Scale

Trailmobile reports a land office business in its free truck weighing scale at the Detroit branch (see above). The company claims that the new scale with an overall platform length of 70 ft. is the only one of its kind in the world. It automatically weighs by axle any tractor or combination of trailers permitted on the highways. Full capacity of the scale is 100,000 lb. A 24-hour free weighing service is offered to truck operators and the number of users averages about 150 a day and is increasing. A large Detroit steel hauler recently moved 90 tandem trailer loads of steel totaling 1500 tons over the scale in a 24-hour period. Fleet operators have found it helpful to get exact weights of the cargo and distribution of load over their trailers by individual axles.

Valves vs. Fuels

The service department of a large truck manufacturer reports that valve trouble, which had been quite prevalent in the central and southern areas of the country, has abated there but now seems to be concentrated on the West Coast, indicating that once again fuel may be responsible. An interesting observation by one engineer is that there has been very little valve trouble by operators using a straight mineral oil with no additives and that in some cases troubles have been eliminated by switching from additive oils to straight mineral oil. He said, however, that there is no conclusive proof that the oils used in combination with certain fuels are at fault.

Fruehauf Pays Off

Fruehauf Trailer Co. is doing right well. It has paid off in full all of its notes payable to banks on lines of credit, marking the first time in many years that no bank obligations are outstanding. Sales have increased steadily month by month during the first half of this year, totaling more than $50 million for the six months' period, nearly $13 million ahead of the same period last year. The company also has sold the building occupied by its branches at Omaha, Neb., and Kansas City, Mo., to investors and is retaining occupancy under long term lease.

(TURN TO PAGE 200, PLEASE)

Speed up

with

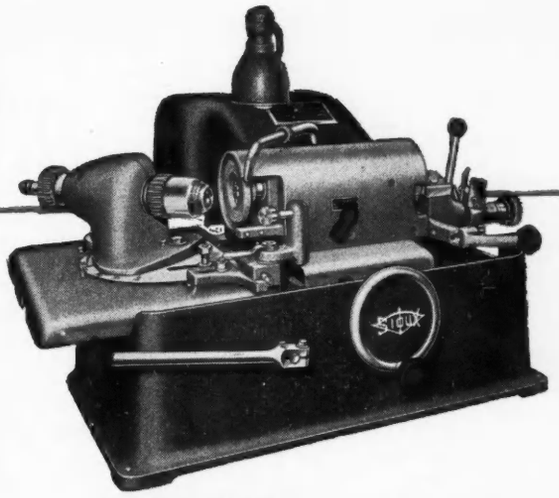
Precision

on

Valve and Seat Grinding

with Dependable

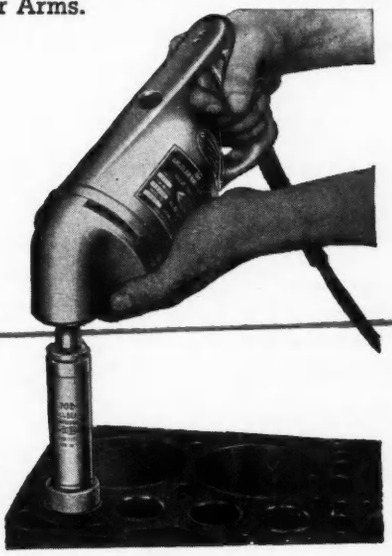
SIOUX TOOLS



SIOUX Wet Valve Face Grinding Machine

More Dollar Value than ever before

Wet Grinding eliminates heat and distortion, producing finest finish and factory precision. Wet Grinds Valves, Valve Ends, Tappets and Rocker Arms.



SIOUX PERFECTED DUAL ACTION

VALVE SEAT GRINDER with Ball Bearing Holder

Precision work in fast time by the almost unbelievable speed of this valve seat grinder. Perfected dual action provides controlled fine vibration for grinding accuracy and dispersion of cuttings. Uniform finish is assured.

Sold only through

Authorized SIOUX Distributors

STANDARD THE WORLD OVER

ALBERTSON & CO., INC. SIOUX CITY, IOWA, U. S. A.

One Basic Design is *right!*

1. EQUALIZER BEAM provides equal weight distribution between the axles and acts as a "lever," reducing the power needed to lift the load over road irregularities.

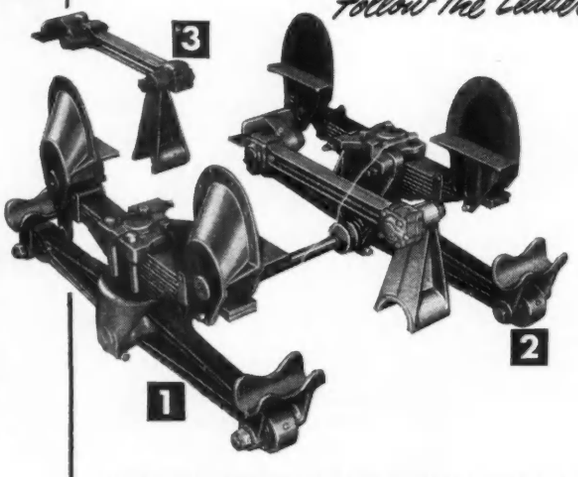
2. BALL AND SOCKET JOINTS provide the flexibility needed to prevent distortion being carried to the springs and frame.

3. TORQUE ROD permits complete absorption of torque, which is the tendency of the axles to turn backwards or forwards on their neutral axis due to starting and stopping inertia.

SIMPLE—RUGGED—COMPACT

HENDRICKSON TANDEM

Follow the Leader!



ok

HENDRICKSON MOTOR TRUCK COMPANY

8001 West 47th Street

Lyons (Chicago Suburb), Illinois

Detroit Dispatch

Continued from Page 198

New Type GM Ad

Experienced observers in the automotive industry were surprised recently to read large advertisements announcing two new GM diesel tractors (see below). Truck advertisements are commonplace, of course, but the interesting angle in the GMC ad was that it was in the form of a corporation announcement signed by President C. E. Wilson. It is said to be the first time that the president of GM has singled out for indorsement in such a way the product of one particular division. The reason for the unusual approach is that the division's management believes that GMC never has taken full advantage of the GM name and prestige and the ad is a direct effort to link the product with the parent organization.

IHC Ready to Unveil New H-D Diesel Line

International soon will announce a new line of heavy duty diesel trucks and tractors. The units will have gvw ratings ranging from 20,000 to 67,000 lb and will include both 4- and 6-wheel units for both highway and off highway use. Limited production of the new line, to be known as the LD-300 series, already is under way.

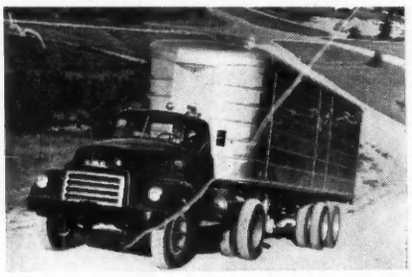
Reo's Detroit Branch

Reo has replaced its former distributor at Detroit with a direct factory branch. The new branch will service Reo sales and service outlets in greater Detroit and extend as far as the Flint and Port Huron areas. It will carry a complete stock of factory parts for all Reo vehicles to assure truck owners of prompt attention to all service needs. It will be able to supply parts within 24 hours for any Reo truck made during the past 40 years.

END

Please resume your reading on P. 35

GMC Medium Truck Diesel



Now in production are the new GMC diesel powered 650 truck shown, and its running mate the 640. These are the lightest diesel models in the line and represent a departure from employing diesels in only heavy vehicles. The models fully described in the Jan. issue of CCJ, Page 84, are powered by the 2-cycle GM 4-71 diesel engine

IT'S SMOOTH AND EASY AS YOU GO ON THE

DELCO LINE

SHOCK ABSORBERS

Built for all Cars, Trucks and Buses

SMOOTH THE ROAD . . . Delco Shock Absorbers cushion the bumps, make the roughest road smoother. They cut down the wear and tear on parts, passengers and payloads. Delco alone produces all types of shock absorbers for all needs. Direct acting, double acting, cam and lever, single acting and knee action.

SMOOTH YOUR SCHEDULE . . . Delco's long experience, engineering know-how and production facilities pave the way to deliveries timed to tie in with your schedules. And the widespread United Motors Service organization makes Delco replacement units and parts available everywhere.

SMOOTH MAINTENANCE . . . Top quality workmanship, the precise tolerances to which Delco Shock Absorbers are built, make them do a better job . . . make them last longer. The Delco Line makes your whole operation run more smoothly, more efficiently.

Get Action P. D. Q.—
PERFORMANCE • DESIGN • QUALITY
Sign on the Delco Line

UNITED SERVICE MOTORS

DELCO SHOCK ABSORBERS
A UNITED MOTORS LINE
Available Everywhere Through
UNITED MOTORS DISTRIBUTORS

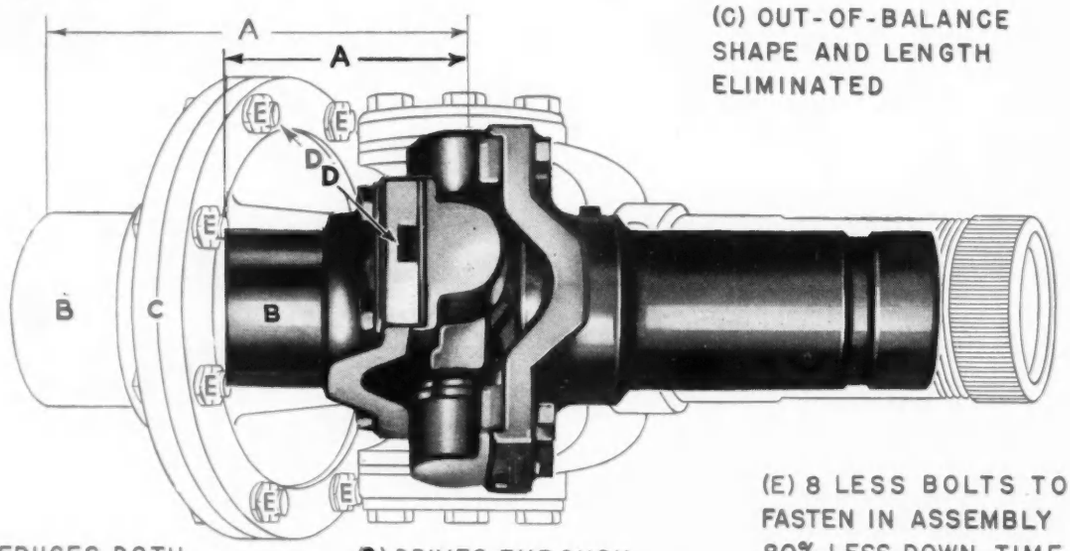
DELCO PRODUCTS
DIVISION OF GENERAL MOTORS CORPORATION, DAYTON, OHIO

DELCO HYDRAULIC SHOCK ABSORBERS

UNIVERSAL Joint Engineering PROGRESS

(A) BRINGS BEARINGS IN THE JOINT CLOSER TO BEARINGS IN TRANSMISSION AND AXLE

(C) OUT-OF-BALANCE SHAPE AND LENGTH ELIMINATED



(B) REDUCES BOTH WEIGHT AND SIZE BY ELIMINATING THE FLANGE

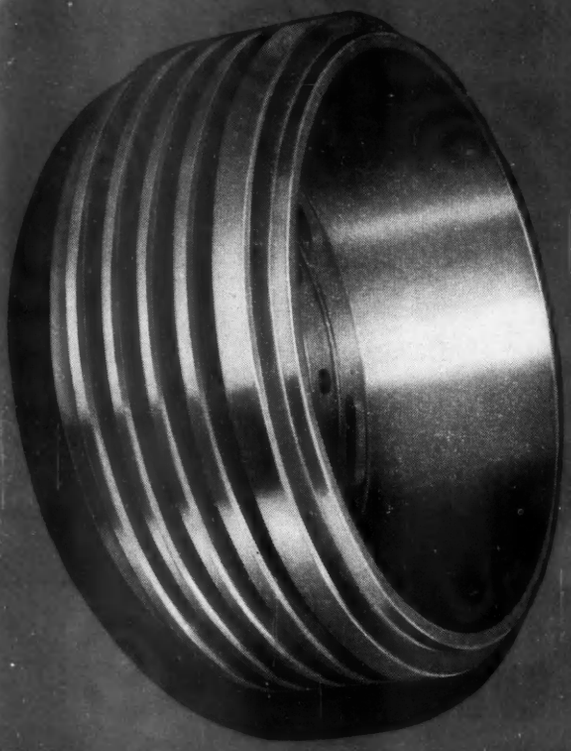
(D) DRIVES THROUGH KEYS-FOR SAFETY AND LONGER LIFE

(E) 8 LESS BOLTS TO FASTEN IN ASSEMBLY 80% LESS DOWN-TIME FOR SERVICING

Practical design aims at improving efficiency of operation while reducing size and weight. MECHANICS contributions to universal joint progress have been (A) elimination of unnecessary attachments—thus reducing size (B) elimination of unnecessary flanges — thus reducing weight (C) elimination of out-of-balance shapes — thus making operation smoother (D) elimination of insecure fastenings — thus increasing safety and life of operation (E) elimination of difficult assembly arrangement — thus speeding up assembly lines and decreasing down-time for servicing. These improvements are available to MECHANICS Roller Bearing UNIVERSAL JOINTS users. Let our engineers explain how these design advantages will benefit your product.

MECHANICS UNIVERSAL JOINT DIVISION
Borg-Warner • 2034 Harrison Avenue Rockford, Illinois

MECHANICS
Roller Bearing B-W
UNIVERSAL JOINTS
For Cars • Trucks • Busses and Industrial Equipment



HEAVY-RIBBED

GUNITE BRAKE DRUMS

(Normalized, if Desired)

OFFER MEASURABLE REDUCTIONS IN BRAKE MAINTENANCE COSTS

Get 4-Wheel Brake Effect On Your 2-Wheel Trailer

When only two genuine GUNITE Brake Drums are installed on a pair of rear tractor or trailer wheels, the more efficient GUNITE Brake Drums take over and do most of the braking. In effect, you get 2-wheel brakes. Good . . . but still only 2 wheels really braking! You can have *superior* 4-wheel brake effectiveness by installing Heavy Ribbed GUNITE Brake Drums all around. This method has reduced maintenance costs from 25% to 40% per year for some operators. Install GUNITES on all dual wheels and lower your maintenance costs.

GUNITE Brake Drums offer you more smooth, effortless, silent, stopping power with your present equipment. Try GUNITES on your toughest runs. See for yourself how they provide smoother, safer, faster stops. See how few adjustments are required. See how both linings and drums last much longer under your worst operating conditions. See how your operating and maintenance costs go down. This trial will show you why drivers and operators everywhere insist on GUNITE Brake Drums. You can't get a better brake drum, nor one that costs less to maintain than GUNITE.

Write for name of your nearest GUNITE Distributor.

Specify GUNITE Tubular-Spoke, Cast Electric-Steel Wheels for Maximum Strength and Minimum Unsprung Weight On Your Next New Equipment

GUNITE FOUNDRIES CORPORATION

▶ ROCKFORD, ILLINOIS

An Important Announcement to America's—

FLEET OPERATORS

ALL-STEEL POWERS PUBLIC UTILITY BODIES

McCABE-POWERS

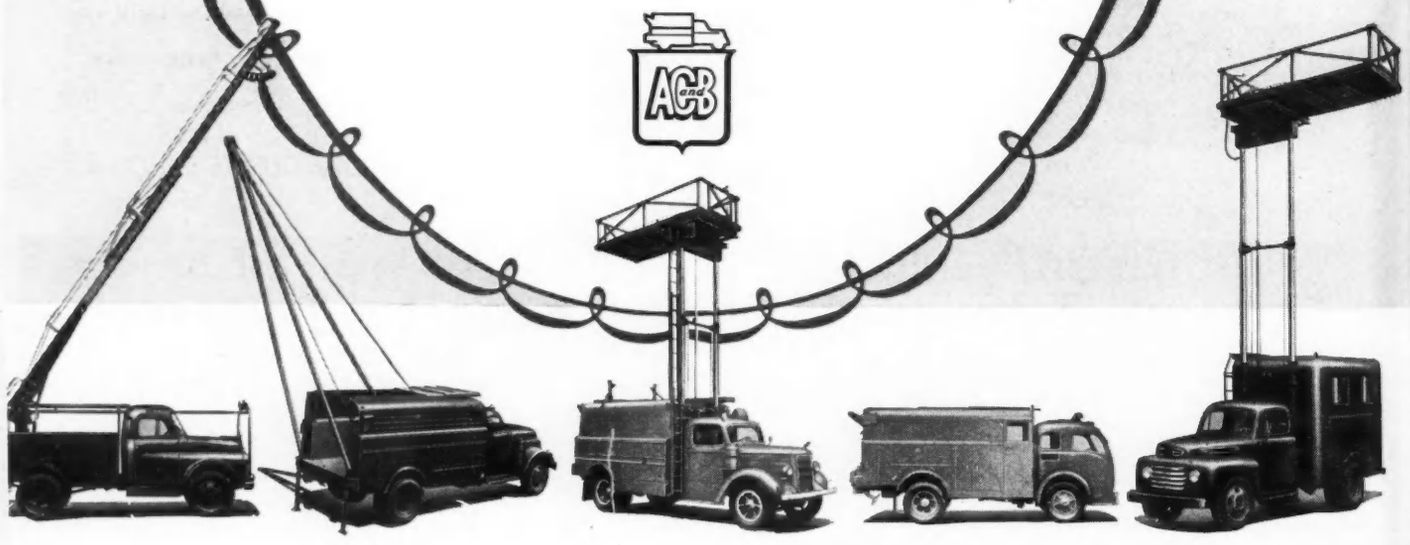
AUTO BODY COMPANY

Acquires

AMERICAN

COACH & BODY COMPANY

ACB and B



A typical group of the many diversified products which the

The Public Utility Division of
Mc Cabe-Powers Auto Body Co.
will continue to serve America's

FLEET OPERATORS

as the—

POWERS American

DIVISION

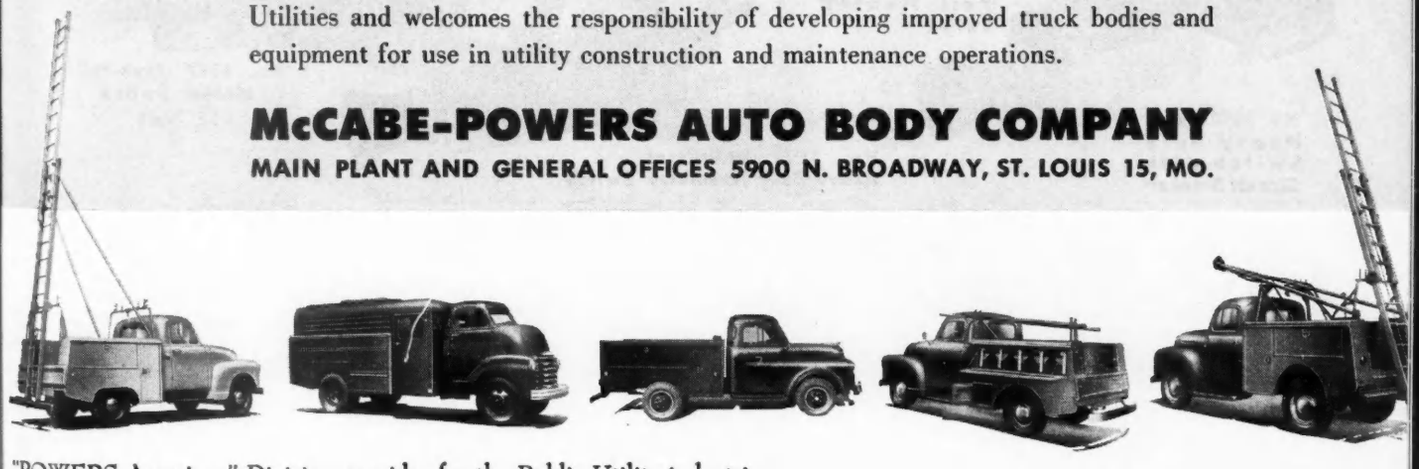
PUBLIC UTILITY BODIES AND EQUIPMENT

McCabe-Powers Auto Body Company, manufacturer of transportation equipment since 1871, has within the last twenty years specialized in the production of truck bodies designed for utility work. With its acquisition of the American Coach and Body Company, one of America's principal utility body builders, McCabe-Powers can now supply *any* type of truck body or automotive equipment required by the public utility industry.

Numerous products of McCabe-Powers and American Coach are similar . . . production of many will be continued, while others will be redesigned and improved. The combined knowledge and facilities of both companies will also be utilized in the development of new, and even more efficient truck equipment for utility work.

The "POWERS-American" Utility Body Division of McCabe-Powers will have manufacturing and distributing points located conveniently throughout the country. It looks forward to the opportunity of working even more closely with America's Public Utilities and welcomes the responsibility of developing improved truck bodies and equipment for use in utility construction and maintenance operations.

McCABE-POWERS AUTO BODY COMPANY
MAIN PLANT AND GENERAL OFFICES 5900 N. BROADWAY, ST. LOUIS 15, MO.



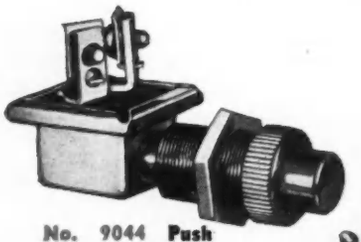
"POWERS American" Division provides for the Public Utility industries.

YOU CAN BEAT & ABUSE

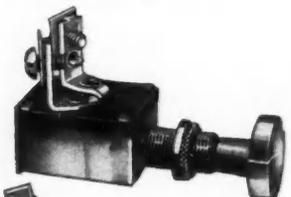
..COLE-HERSEE Switches

but you can't beat them for

Quality & Ruggedness, Performance & Dependability



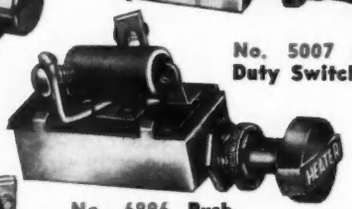
No. 9044 Push Button Dust-proofed Starter Switch



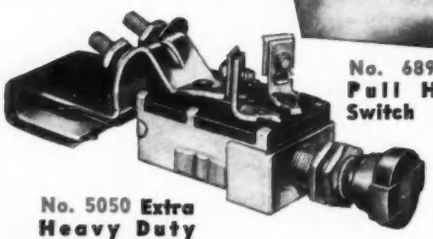
No. 5007 Heavy Duty Switch

No. 1180 Trailer Connector Box and Grip-tite Cable Protector

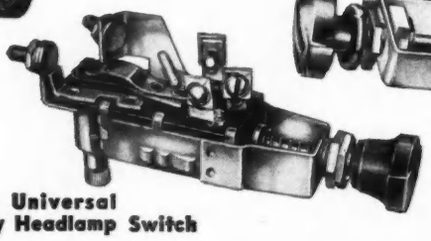
No. 5027 Extra Heavy Duty Switch



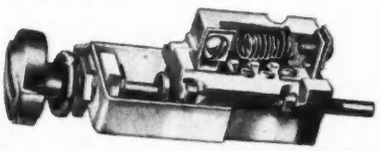
No. 6896 Push-Pull Heater Switch



No. 5050 Extra Heavy Duty Switch with Circuit Breaker



No. 7123 Universal Heavy Duty Headlamp Switch



No. 6887 Push-Pull Heater Switch 12 volt

COLE-HERSEE CO.

20 Old Colony Ave., Boston 27, Mass.

Manufacturers of

Headlamp Switches · Panel Switches · Plugs & Sockets · Door Switches · Starter Switches · Trailer Connectors · Push-Pull Switches · Pilot Lights · Heater Switches · Toggle Switches · Foglight Switches · Fuse Blocks

turn back the pages!

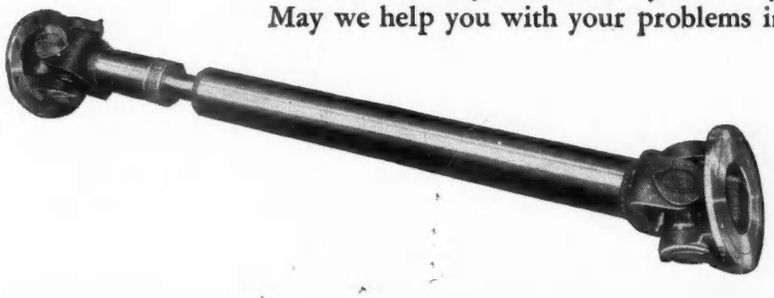
Remember the days of the Argonne offensive, Verdun, and the abdication of the Kaiser? FWD trucks like this rumbled through the thick of it overseas. They carried thousands of men, and ton after ton of materials, on this side too. Blood Brothers made propeller shafts for FWD then . . . and still do. There's a real record of customer confidence!

BLOOD BROTHERS Universal Joints

PASS THE TESTS OF TIME . . . AND USE

FWD — and the other truck manufacturers — have stepped up horsepower and speed to meet today's needs. Propeller shafts turning at 1800 R.P.M. were going "too fast for good sense" in 1918. Today, our shafts are dynamically balanced at 3000 R.P.M. Foot-pounds-torque capacity have been multiplied. These changes demand the best of materials, the finest precision machining.

Blood Brothers Propeller Shafts are built for heavy-duty, shock-load performance . . . they'll meet every test in your laboratory and on the road. May we help you with your problems in flexible transmission of power?



This high-speed drive line is typical of the many Blood Brothers Universal Joint Assemblies giving dependable service on today's fast, powerful trucks.

BLOOD BROTHERS machine co. ALLEGAN, MICHIGAN

A Division of Standard Steel Spring Co. Chicago Office: 122 S. Michigan

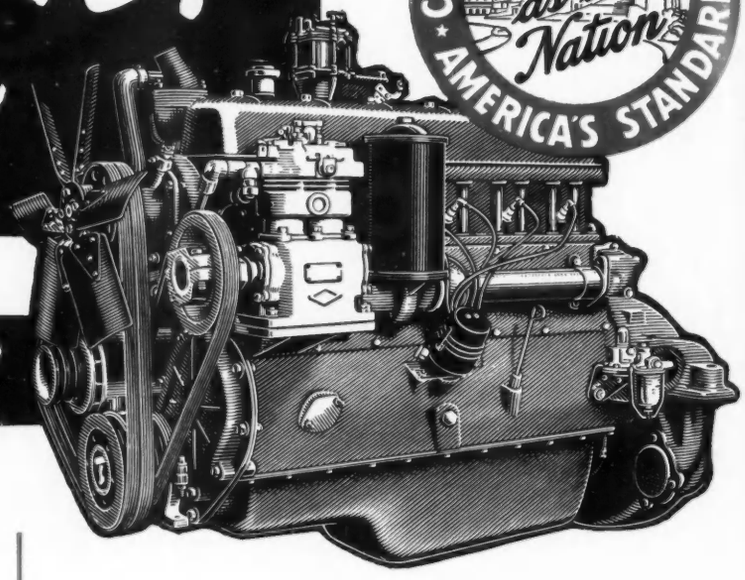
HERE IT IS!

..the GREAT *NEW* CONTINENTAL

RED SEAL

MODEL T-6427

CONTINENTAL MOTORS ★ *Powerful as the Nation* ★ AMERICA'S STANDARD



GREATER POWER

PLUS

ECONOMY AND LONG LIFE

•

New high-compression combustion chamber wrings the last ounce from the fuel —increases economy and smoothness by promoting turbulence.

•

New cam contours improve valve action, prolonging life of valves and springs.

•

New improved sodium-cooled exhaust valves with ***positive rotary action*** prevent power loss and spring damage due to carbon deposits on seats.

•

These refinements are IN ADDITION to such time-proven Red Seal features as patented individual porting, directional coolant flow, dynamically-balanced alloy steel crankshaft with Tocco-hardened journals, Durex-100 rod and main bearings, removable tappets, leakproof water pump, and other examples of progressive engineering which have made Continental engines first choice for countless specialized jobs.

Engineered to Today's Need for Rugged, Dependable Power

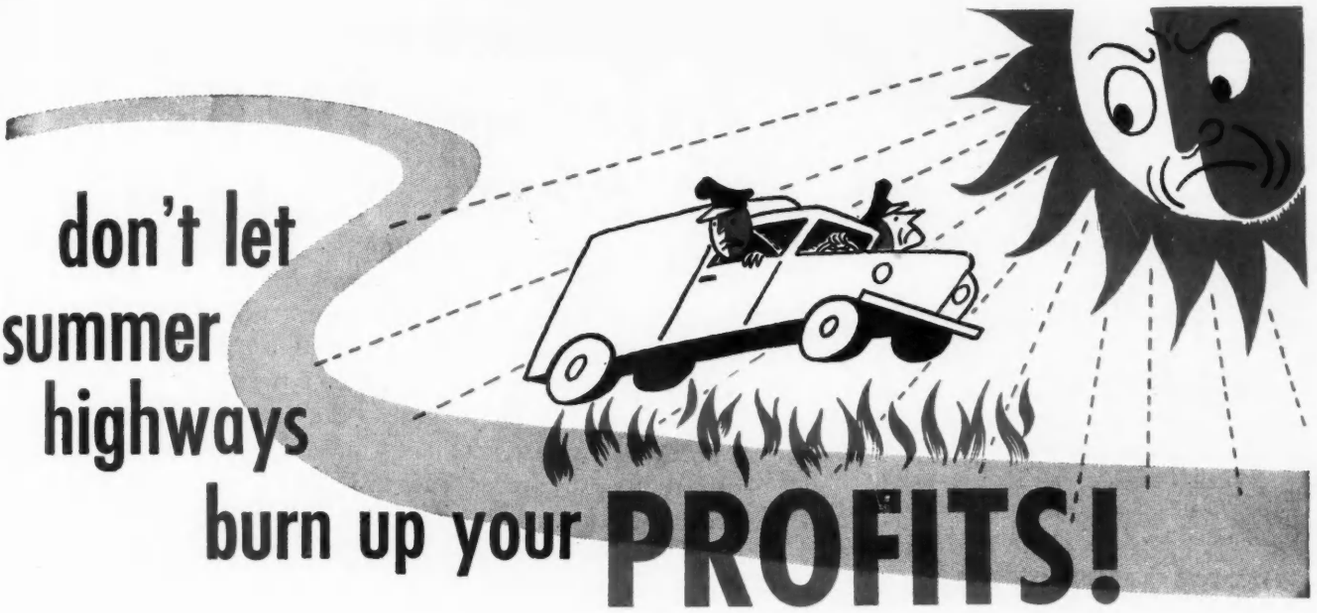
Balanced in all the factors that make for outstanding performance is this 1950 version of the T-6427, an engine that has proved, in millions of miles of service, an unusual capacity to "take it" where the going is tough. Drawing on experience dating from 1902, Continental engineers have joined improved materials, new features, and advanced manufacturing methods, under a unique system of product quality control, to achieve a new and brilliant combination of the qualities that count. New power and flexibility for larger payloads and faster highway schedules . . . new economy . . . new smoothness . . . new stamina for long trouble-free life—in short, the balanced performance that means lowest ton-mile costs. Write for bulletins and full information.

GENUINE CONTINENTAL PARTS AND FACTORY-AUTHORIZED SERVICE FROM COAST TO COAST

Continental Motors Corporation

MUSKEGON, MICHIGAN

don't let summer highways burn up your PROFITS!



When highways are hot enough to cook your goose—profit-wise, that's the time to double check your fleet tire-air service. Keep your fleet operating at top efficiency on air protected by *special* Schrader Heat Resisting Caps and Cores . . . backed by the dependability and precision of Schrader Chucks and Gauges.

Schrader Heat Resisting Valve Caps (#7612) and Schrader Heat Resisting Valve Cores (#7611) are specially built to withstand the higher temperatures of summer driving. Schrader Truck Replacement Valves vulcanized the Schrader way—beat the heat every time! Put all these dependable summer tire-air service aids to work, and you have the perfect team to get your loads through on time. Highway trucks and buses should carry boxes of Schrader Valve Cores and Caps as spares—that pays dividends in reducing tire troubles.

Not only should tires, valves and pressures be checked, but all your gauging and inflating equipment! A gauge or inflating device that's a pound or two off can cost you money! The complete Schrader line of Chucks and Gauges gives you the finest air service tools available. So check over your tire-air service equipment—replacement with new Schrader products costs less in the long run.

Schrader Tire-Air Service specialists know the answers to hot weather driving—and can show you how special Schrader Valve Cores applied to your fleet can help you overcome tire problems of summer trucking. Check with your supplier, he has the information you'll want. And, *always specify Schrader Products!*

THESE SCHRADER PRODUCTS CUT OPERATING COSTS ON EVERY VEHICLE YOU OPERATE

THE WORLD STANDARD
Schrader.
VALVES
FOR EQUIPMENT AND REPLACEMENT

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated
BROOKLYN 17, NEW YORK

CHEVROLET

ADVANCE-DESIGN TRUCKS

POPULARITY LEADERS Chevrolet trucks are the favorites by far! In every postwar year truck users have bought more Chevrolets than any other make. And that's proof of the owner satisfaction they have earned!

PERFORMANCE LEADERS Chevrolet trucks give you high pulling power over a wide range of usable road speeds . . . cut down total trip time with high acceleration on the straightaway.

PAYLOAD LEADERS Careful design and rugged construction permit you to haul more goods more miles—at lower cost per ton mile! You enjoy real savings on operating and repair costs.

PRICE LEADERS You're money ahead with Chevrolet trucks! Chevrolet's rock-bottom initial cost—outstandingly low cost of operation and upkeep—high-trade-in value, all add up to the lowest price for you.

Packed with VALUE . . . *Primed with* POWER

Chevrolet Advance-Design trucks have everything it takes —and plenty to spare. Rugged construction to withstand the wear and tear. Handling ease and comfort to lighten the load of a day's work. And more power than ever! Two great Valve-in-Head engines—the Loadmaster 105 h.p. and the Thriftmaster 92 h.p.—make these the most powerful trucks Chevrolet has built! Yes, these new jobs bring you peak value—and at a low price. They cost surprisingly little to buy, to run and maintain. That's why Chevrolet trucks outsell them all!

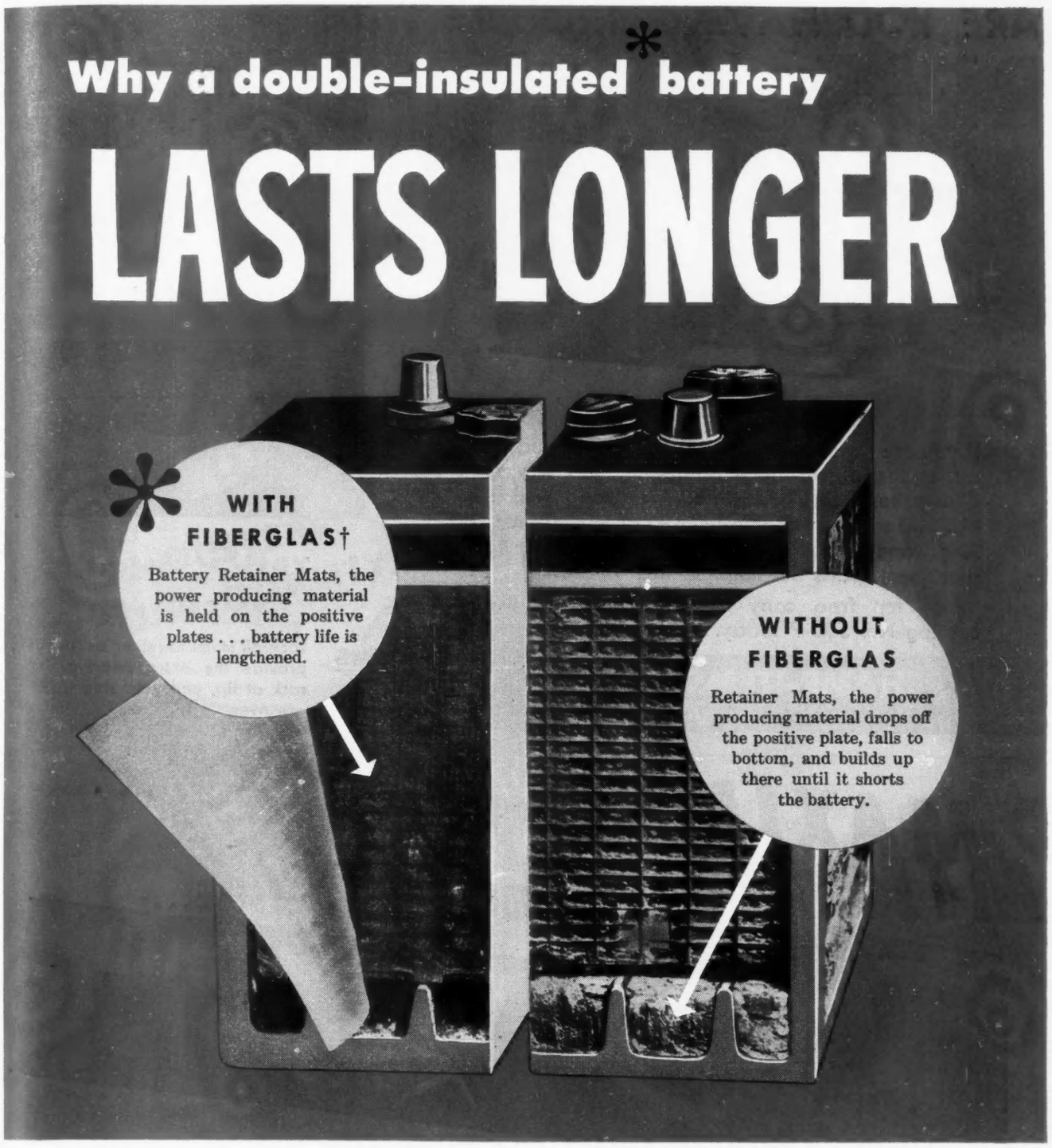
CHEVROLET MOTOR DIVISION, *General Motors Corporation*, DETROIT 2, MICH.

AHEAD WITH ALL THESE PLUS VALUES

• TWO GREAT VALVE-IN-HEAD ENGINES: the New 105-h.p. Loadmaster and the Improved 92-h.p. Thriftmaster—to give you greater power per gallon, lower cost per load • THE NEW POWER-JET CARBURETOR: smoother, quicker acceleration response • DIAPHRAGM SPRING CLUTCH for easy action engagement • SYNCHRO-MESH TRANSMISSIONS for fast, smooth shifting • HYPOID REAR AXLES—5 times more durable than spiral bevel type • DOUBLE-ARTICULATED BRAKES—for complete driver control • WIDE-BASE WHEELS for increased tire mileage • ADVANCE-DESIGN STYLING with the "Cab that Breathes" • BALL-TYPE STEERING for easier handling • UNIT-DESIGN BODIES—precision built.

Why a double-insulated* battery

LASTS LONGER


WITH FIBERGLAS†
Battery Retainer Mats, the power producing material is held on the positive plates . . . battery life is lengthened.
WITHOUT FIBERGLAS
Retainer Mats, the power producing material drops off the positive plate, falls to bottom, and builds up there until it shorts the battery.

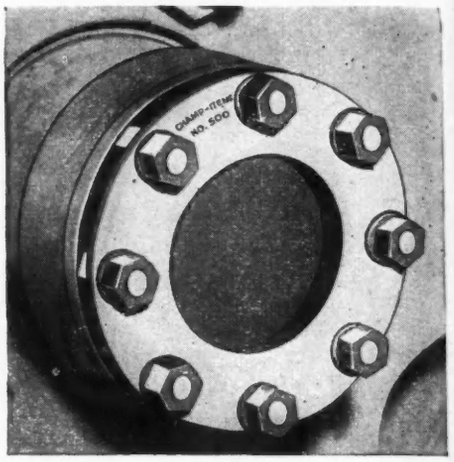
You get more battery mileage per dollar when you standardize on batteries that are "double-insulated" with Fiberglas Retainer Mats. That's why battery manufacturers offer them in their heavy-duty line of truck and auto batteries. That's why more and more operators have switched completely to batteries "double-insulated" with Fiberglas Retainer Mats.

For longer, better service, get batteries that are "double-insulated" with retainer mats made by

OWENS-CORNING
FIBERGLAS

†FIBERGLAS is the trade-mark (Reg. U.S. Pat. Off.) of Owens-Corning Fiberglas Corporation for products made of or with glass fibers.

ARE YOU HAVING TROUBLE WITH REAR WHEEL STUDS?



—*Get this* **FREE** *Catalog today!*

If you are having trouble with rear wheel studs breaking off and crippling truck operation, you will want the Champ-Items catalog with complete information on the No. 500 series of Champ-Items Rear Wheel Stud Locking Rings, and the other 200 automotive replacement parts to help service fleets.

Write for free copy of Champ-Items catalog No. 500-P today.

CHAMP-ITEMS, INC.
6191 Maple Ave., St. Louis 14, Mo.

AUTOMOTIVE CHAMP-ITEMS INC REPLACEMENT PARTS

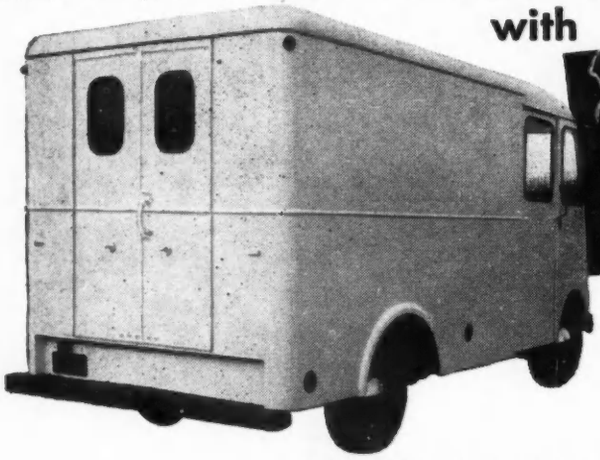
TRUCK TROUBLE INSURANCE

Lock all studs together as one unit, provide the extra bearings, stop rock at tip, and your stud troubles are over.

MAXIMUM PAYLOAD INSIDE . . .
MINIMUM DIMENSIONS OUTSIDE...

with

MET-L-WOOD METAL BONDED TO PLYWOOD
Ribless BODIES
TRADE MARK

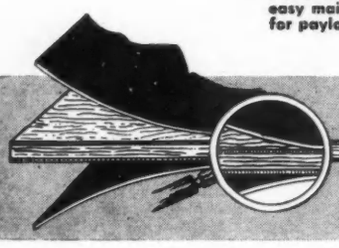


Met-L-Wood "Ribless" Bodies add clean lines, easy maintenance, and high crush resistance for payload protection to space- and weight-saving advantages.

YOU get *full* utilization of usable space with Met-L-Wood "Ribless" Bodies on your trucks — first, because "Ribless" Bodies are 15% to 40% lighter than usual construction of equal strength; and second, because the thin, strong walls of Met-L-Wood "Ribless" Bodies allow more payload, size for size, than *any other type of truck-body or trailer construction.*

All this built-in economy of "Ribless" Bodies stays on the job — indefinitely. Most "Ribless" Bodies outwear two or more trucks... Some have been in service over fifteen years.

Write today for full details on "Ribless" Bodies to meet your requirements.



MET-L-WOOD CORPORATION
6755 W. 65th Street, Chicago 38, Illinois
MET-L-WOOD . . . *STRONG . . . LIGHT . . . DURABLE . . . for bigger, more economical truck payloads.*

ENGINEERED FILTRATION
Fleet Operation Demands
The Best in Oil Filtration • • • • •
wix
TRADE MARK REG.
ENGINEERED FILTRATION PROVIDES
ONE QUALITY ONLY • • • • THE BEST!
WIX doesn't take anything out of its product to offer you a lower cost. This is no "second" line, graded down to a fleet price, but the original, top quality, heavy duty WIX Cartridge, engineered precisely for every filter on your pay load units.
Good fleet maintenance demands an Oil Filter Cartridge that keeps lubricating oil and engines cleaner—longer, with maximum time between replacements. WIX delivers it with its famous Micro-pore construction, under electronic control, insuring always uniform, high sludge capacity.
In trim, prick-punched, lithographed cans with big bale handles and built-in grip seals, or in the famous WIX Sock Type construction, here's the best in fleet oil filtrarion.
GENUINE wix
wix
wix
TRADE MARK REG.
OIL FILTERS
FILTEREFILS
WIX ACCESSORIES CORP'N • GASTONIA • N•C•

CANADIAN FACTORY: WIX ACCESSORIES CORP. LTD., 11 Wabash Ave., Toronto 3, Ont.

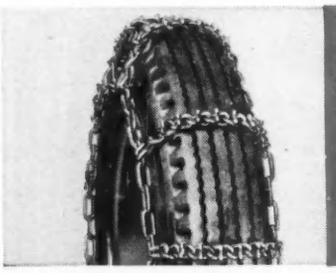
Count on

CAMPBELL

Lug-Reinforced

CHAINS

...FOR MAXIMUM SAFETY and LOWEST OPERATING COST

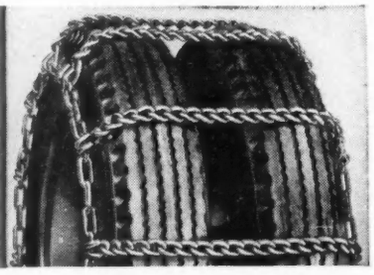


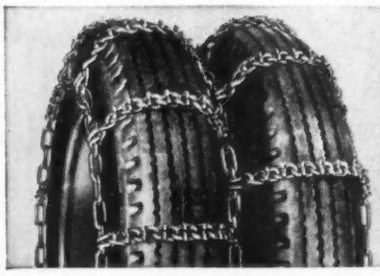
SINGLE

2 or 4 link spacing . . . lug-reinforced, highway or mud service for cars, trucks and buses.

DUAL

2 or 4 link spacing . . . available in highway or mud service.





DUAL-TRIPLE

Staggered cross chains . . . lug-reinforced, highway or mud service for all dual pneumatic tires.

Special chain steel—expertly formed and welded—uniformly case-hardened—plus complete quality control assure top strength and protection against wear. In addition, color-coded boxes and bags save handling time and make chain storage easier. For more miles per dollar count on Campbell Tire Chains.

CAMPBELL CHAIN

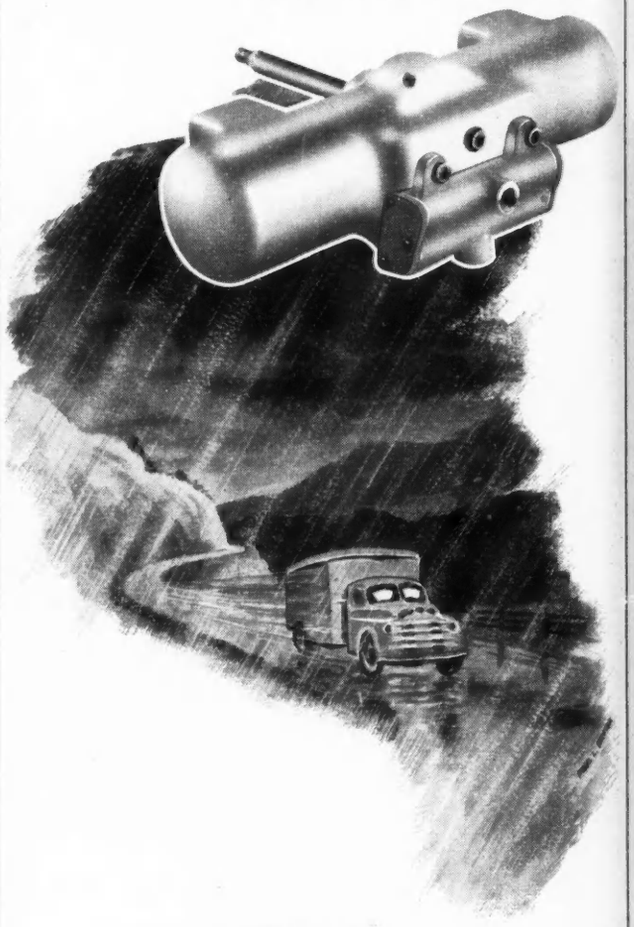
CAMPBELL CHAIN *Company*

Main Office—York, Pa.

Factories—York, Pa. and Burlington, Iowa

There is no weak link in the Campbell Line

LET COMPARISON BE YOUR GUIDE . . .



THE NEW "CHALLENGER" MOTOR GUARANTEES YOU THE EXTRA POWER AND STAMINA NEEDED TO EFFECTIVELY CLEAN TODAY'S LARGER WINDSHIELDS!

. . . . for over 20 years, Sprague Devices has been keeping bus, truck and locomotive windshields clear of rain, sleet and snow. This new CHALLENGER motor is true to that tradition. In it is combined the newest in design and unsurpassed economy. There are only four moving parts. All the "work" is done by these four parts. Nothing else moves — nothing else wears! Delayed schedules caused by wiper failures can be a "thing of the past" if you SPECIFY AIR-PUSH.

Sprague DEVICES, INC.
Michigan City, Indiana

MANUFACTURERS OF THE FAMOUS
AIR-Push
WINDSHIELD WIPERS

GENUINE

BOHNALITE

AUTOTHERMIC PISTONS

SERVICE DIVISION HEADQUARTERS
HOLLAND, MICHIGAN

Silent *AUTOTHERMIC PISTONS* Start Quiet . . . Run Quiet . . . and Save On Gas and Oil!

You can't keep a piston quiet if it is fitted loosely in the bore to allow for expansion. If its skirt collapses it loses its fit. Nelson Bohnalite Autothermic Pistons are the proven solution to both problems, because they employ steel struts, paralleled by aluminum, that act as automatic thermostats to control piston fit, and maintain the same clearance—hot or cold!

When you put famous Nelson Bohnalite Autothermic Pistons in an engine, you provide your customer with the pistons scientifically designed for unequalled quietness, strength, long life and fuel economy . . . the pistons that show no loss in skirt diameter in long tests of 50,000 miles and up . . . the pistons conclusively proven in actual use by automotive manufacturers!

BOHN ALUMINUM & BRASS CORPORATION
Executive Offices • Detroit 26, Michigan
Service Division, Holland, Michigan

GENUINE
BOHNALITE
PRODUCTS

- Pistons
- Engine Bearings
- Reconditioned Connecting Rods
- Rebabbitted Connecting Rods
- Piston Pins
- Water Pumps
- King Bolts
- Valve Springs
- Rod Dippers
- Water Tubes
- Babbitt Metal
- Bolts
- Nuts
- Shims
- Solders

GET IT FROM YOUR JOBBER

PERFECTION

RUGGED POWER 1918

This modern unit is Perfection's Model 827 Heavy-Duty Iso-Draulic ROLL-A-LIFT mounted with a sturdy type 354 Body.

RUGGED POWER 1950

Perfection was one of the pioneers in the independent designing and building of Bodies and Hoists for all makes of trucks.

Today, having worked hand in hand with truck manufacturers for 32 years, they know that we build units that stand the gaff--Hoists that will lift more than required and do it longer, faster, steadier and more safely than other units of the same rating--Bodies that are engineered for the jobs to be done. Dealers and users know that a strong, progressive organization stands back of every unit.

*Note: An enlarged mounted photo of the old truck pictured above (free of charge--and with no advertising) is yours for the asking. Write today.

THE PERFECTION STEEL BODY COMPANY
Galion, Ohio, U. S. A.

PERFECTION STAKE and DUMP BODIES HYDRAULIC HOISTS

FOR ANY TRUCK STANDARD or SPECIAL UNITS IN ALL SIZES • FOR ANY USE

It's in th' bag!

CLEAN ECONOMICAL TROUBLE-FREE COOLING SYSTEMS
And NO Over-Heating with
SAND-BANUM SPECIAL
Pure Colloidal Concentrated Tablets

This is the SAFE-WAY to Remove and prevent rust and scale in ALL Radiator Cooling Systems. Outstanding Performance Record — Serving and Saving.

Write for Data on $18.00 Offer and Performance Guarantee.

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SAND BANUM

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Use the solder that makes your job easier... Federated Gardiner brand Acid Core Solder.

The flux is right in the solder. No messy acid or fluxes to contend with. All you need is a torch or iron . . . and Federated Gardiner brand Solder.

In all commercial sizes and compositions. Listed by Underwriters' Laboratories, Inc. Analysis prominently displayed on carton.

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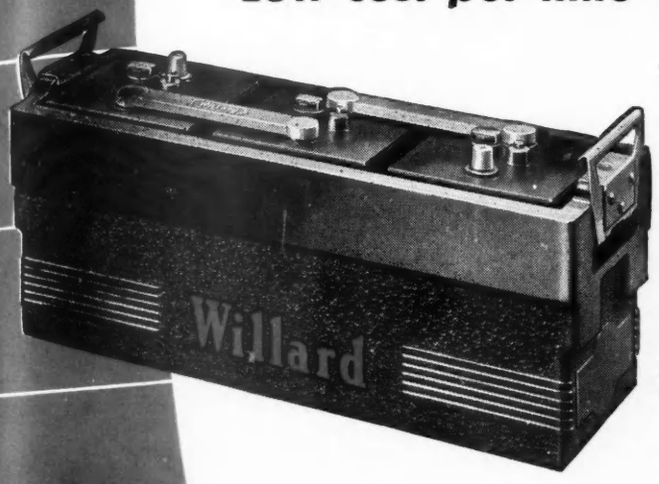
AMERICAN SMELTING AND REFINING COMPANY
WHITING, INDIANA (CHICAGO)

federated first in the non ferrous field FMD

BUY Willard

For Quick Starts • Long Life

Low cost per mile on every battery job



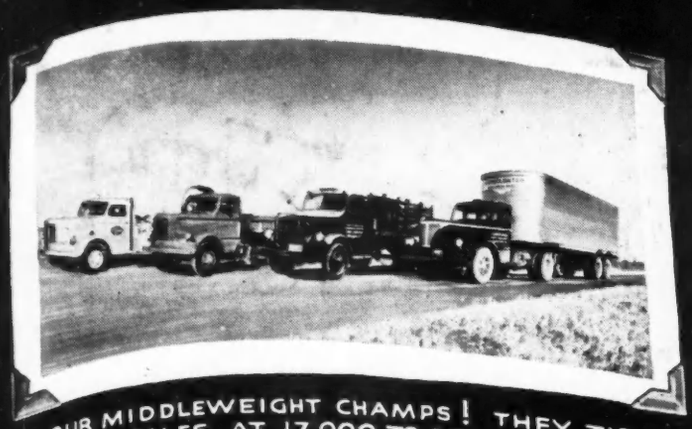
TRG and TWG Types for Heavy Trucks and Tractors. For 6-volt starting, lighting and ignition on heavy Diesel or gasoline powered trucks and tractors. Sturdy, hard rubber containers. Exclusive Willard "Safety-Fill" construction to prevent over-filling. TWG types with selected wood separators and glass fibre retaining mats for normal service. TRG types with Willard Rubber Insulation and glass fibre retaining mats for cycling service and for vehicles in severe, high mileage service.

BRG and BWG Types for Buses and Motor Coaches. For 12-volt starting, lighting and ignition on Diesel and gasoline powered motor coaches and buses. Strong, hard rubber containers. Exclusive Willard "Safety-Fill" construction to prevent over-filling. BWG types with selected wood separators and glass fibre retaining mats for normal service. BRG types with Willard Rubber Insulation and glass fibre retaining mats for cycling service and for vehicles in severe, high mileage service.

CWG Types for Light Trucks. For 6-volt starting, lighting and ignition on light to medium weight trucks and for passenger cars in commercial service. Dual insulated with selected wood separators and glass fibre retaining mats. Sturdy, hard rubber containers. Exclusive Willard "Safety-Fill" construction to prevent overfilling.

WILLARD STORAGE BATTERY COMPANY

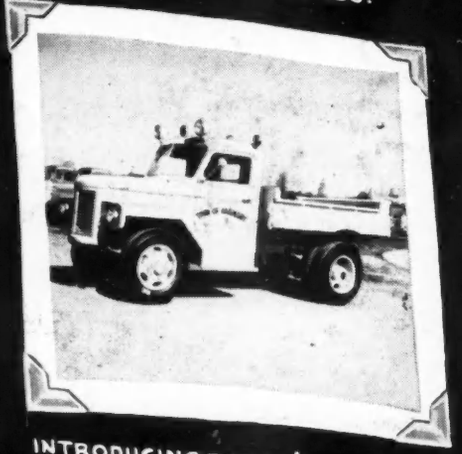
Cleveland • Los Angeles • Dallas • Memphis • Portland • Toronto



OUR MIDDLEWEIGHT CHAMPS! THEY TIP THE SCALES AT 17,000 TO 25,000 GVW... MODELS HR--HG--HA--HRC

THESE MEDIUM-HEAVIES WIN BLUE RIBBONS IN THE 28,000 TO 34,000 GVW CLASS. MODELS YU--ZU--SU

OUR BIGGEST 4X4 BRUTES WEIGH IN AT 40,000 TO 44,000 GVW MODELS M-7 AND M-10



INTRODUCING THE LD! OUR POPULAR NEW OFFSPRING--THE ONLY *TRUE* LIGHT-DUTY 4X4! A 14,500 GVW WONDER BOY

BIG 6X6 BRUISERS! 30,000 TO 60,000 GVW MODELS M 6X6--H 6X6--MU6

Meet the whole family!

This line-up in our album covers the big FWD family of *basic* models. You should see the *other* pages... picture-after-picture of both highly specialized and conventional applications... plus photo-proof of economy, safety and spectacular performance... both on and off the highway. Put the *extra-traction* and *proper weight distribution* of this family of bread-winners to work for you, too! See your FWD distributor or write FWD.

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